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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/GB98/01708  <b>(22) International Filing Date:</b> 10 June 1998 (10.06.98)  <b>(30) Priority Data:</b> <table border="0"> <tr> <td>9711992.9</td> <td>10 June 1997 (10.06.97)</td> <td>GB</td> </tr> <tr> <td>9717346.2</td> <td>15 August 1997 (15.08.97)</td> <td>GB</td> </tr> <tr> <td>9803061.2</td> <td>13 February 1998 (13.02.98)</td> <td>GB</td> </tr> <tr> <td>9803202.2</td> <td>16 February 1998 (16.02.98)</td> <td>GB</td> </tr> </table> <b>(71) Applicant (for all designated States except US):</b> KARO BIO AB [SE/SE]; Novum, S-141 57 Huddinge (SE).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> ÖHMAN, Lars [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). BONN, Tomas [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). CARLQUIST, Mats [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). ENGSTRÖM, Owe [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). GOEDE, Patrick [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). HEDFORS, Åsa [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). HOLMGREN, Erik [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). KOEHLER, Konrad [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). BZOZOWSKI, Andrzej, Marek [GB/GB]; The University		9711992.9	10 June 1997 (10.06.97)	GB	9717346.2	15 August 1997 (15.08.97)	GB	9803061.2	13 February 1998 (13.02.98)	GB	9803202.2	16 February 1998 (16.02.98)	GB	of York, Heslington, York YO1 5DD (GB). PIKE, Ashley, Charles, William [GB/GB]; The University of York, Heslington, York YO1 5DD (GB). HUBBARD, Roderick, Eliot [GB/GB]; The University of York, Heslington, York YO1 5DD (GB).  <b>(74) Agent:</b> WITHERS & ROGERS; 4 Dyer's Buildings, Holborn, London EC1N 2JT (GB).  <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>Without international search report and to be republished upon receipt of that report.</i>
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<b>(54) Title:</b> ESTROGEN RECEPTOR LIGANDS  <b>(57) Abstract</b>  Crystal comprising at least part of the ER $\alpha$ ligand binding domain, optionally bound to a ligand, ligands that bind to ER receptors, and methods of designing them, and a homology model of the ER $\beta$ receptor.														

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## Estrogen Receptor Ligands

This invention relates to estrogen receptor ligands. More particularly, the present invention relates to ligands which will bind to estrogen receptors, crystals of such receptors, including crystals of receptor and ligand, synthetic ligands, methods of using such synthetic ligands and methods for designing ligands which will bind to the estrogen receptor.

The thyroid hormone receptor (TR) is known and its three-dimensional structure, and hence its ligand binding domain, has been determined. Knowledge of the three-dimensional structure has enabled a better understanding of the modes of ligand binding and the determination of the optimum conformation of ligand to bind to the receptor. This understanding will provide a pharmacophore model usable in the design of ligands, such as drugs, to bind to the thyroid receptor. It is generally believed in the art that the TR structure also provides a guide to the design of ER ligands.

Estrogen steroid hormone and thus the estrogen receptor (ER) is a member of the steroid hormone receptor family. Its primary natural ligand is estradiol (E2). However, it is known that a large number of structurally diverse non-steroidal compounds such as raloxifene, centchroman, coumestrol, diethylstilbesterol, esculin, tamoxifen, zearalenone, and zindoxifen also bind to the estrogen receptor (Fig. 8). The majority of these non-steroidal estrogen receptor ligands contain 2-4 carboxylic, aromatic, and/or heterocyclic rings connected by a 1-3 atom chain. One or more of the rings may be fused with the central atom chain or with each other.

It has been proposed that the receptor possesses a multi-functional modular structure potentially having discrete domains for DNA binding, ligand binding, and transactivation. The ligand binding domain (LDB) has been designated domain E and is the largest domain of the estrogen receptor. The ligand binding domain includes a ligand recognition site and regions for receptor dimerization, interaction with heat

shock proteins, nuclear localization and ligand dependent transactivation.

A review of the structure and functioning of the estrogen receptor is provided in an article by Katzenellenbogen, J. *et al.*, *Steroids*, (1997) **62**(3): 268-303.

It is known that compounds which bind to the estrogen receptor are potentially useful in the treatment a wide range of disease states. These include estrogen agonists for treatment of disease linked to estrogen deficiency (e.g., osteoporosis, cardiovascular and neurodegenerative diseases in post menopausal women) and estrogen antagonists for treatment of breast and uterine cancer. Furthermore, it is known that certain ligands such as tamoxifen display mixed agonist/antagonist action (that is they are either estrogen agonists, estrogen antagonists, or a partial estrogen antagonists when binding to the estrogen receptors of different tissues) and such compounds may simultaneously prevent bone loss and reduce the risk of breast cancer. It is further known that benzothiophenes are usable as agonists or antagonists to steroid hormones, and that it is possible to modify their binding mechanics, for example the binding affinity, by changing the substituent groups at various positions on the molecule. Therefore, it would be desirable to be able to design ligands which are recognizable by and able to bind to the estrogen receptor. Additionally, it would be desirable to know the three dimensional structure of the estrogen receptor. Such knowledge would be useful for the design of compounds intended to bind to the estrogen receptor. The present inventors have been able to produce an estrogen receptor crystal and to determine from that the three dimensional structure of the estrogen receptor. Unexpectedly, the thus determined ER structure reveals that the TR structure does not provide a good model for binding of ligands to ER.

Therefore, in a first aspect the present invention provides an estrogen receptor ligand binding domain crystal.

In a second aspect, the present invention provides ligands, particularly synthetic ligands, of estrogen receptors by use of the crystals.

In a third aspect of the invention, methods for designing ligands which will bind to the estrogen receptor are provided. Such methods use three dimensional models based on the crystals of the estrogen receptor. Generally, such methods comprise determining compounds which are likely to bind to the receptor based on their three dimensional shape compared to that of the estrogen receptor and in particular the ligand binding domain of the estrogen receptor. Preferably, those compounds have a structure which is complementary to that of the estrogen receptor. Such methods comprise the steps of determining which amino acid or amino acids of the ligand binding domain of the estrogen receptor interacts with the binding ligand, and selecting compounds or modifying existing compounds, to improve the interaction. Preferably, improvements in the interaction are manifested as increases in the binding affinity but may also include increases receptor selectivity and/or modulation of efficacy.

Preferably, the ligands bind to the ER with a high binding affinity, for example within the range of 20-2000 pmol.

The ligands may bind tightly bind to the ER yet not up-regulate gene expression thereby inhibiting the action of estradiol and estradiol mimetics. Thus, the invention also provides a method of inhibiting the activity of estradiol or estradiol mimetics by providing ligands which bind to ER with a high affinity, blocking the activity of estrogens. Alternatively, binding of the ligand to the ER may cause conformational changes to the ER inhibiting further binding thereto. The invention further provides a method of inhibit estradiol activity in an animal, the method comprising administering to the animal a ligand which binds to at least the LBD, of the ER with high affinity and blocks binding of further ligands to at least the LDB of the ER. Such ligands are useful in, for example, the treatment of estrogen receptor mediated diseases in females.

### **Structure Based Design of ER Ligands**

The present work has elucidated the structure of the ligand binding cavity of

the estrogen receptor. Knowledge of the structure of this cavity has utility in the design of structurally novel ER ligands and in the design of non-obvious analogs of known ER ligands with improved properties. These enhanced properties include one or more of the following: (1) higher affinity, (2) improved selectivity for either the  $\alpha$ - or  $\beta$ -isoform of the ER, and/or (3) a designed degree of efficacy (agonism vs. partial agonism vs. antagonism). Without knowledge of the ER structure, modifications to produce ligands with enhanced properties and a reasonable likelihood of success would not be available to those skilled in the art. The ER receptor structure also has utility in the discovery of new, structurally novel classes of ER ligands. Electronic screening of large, structurally diverse compound libraries such as the Available Chemical Directory (ACD) will identify new structural classes of ER ligands which will bind to the 3-dimensional structure of the estrogen receptor. Additionally the ER structure allows for "reverse-engineering" or "*de novo* design" of compounds to bind to the ER.

#### **(1) Enhanced Affinity**

The present work has revealed the presence of receptor defined  $\beta$ - and  $\alpha$ -face cavities centered respectively above and below the B- and C-rings of estradiol.

The present invention provides new ligands which exploit this discovery by filling the  $\alpha$ - and  $\beta$ -face cavities.

Preferably, the ligand fills at least one of the  $\alpha$ - and  $\beta$ -face cavities so as to exclude water from the cavity or cavities.

The ligands produced in accordance with the invention bind more effectively to the ER than estradiol. The ligand may bind with twice the binding affinity of estradiol, preferably three times the affinity, and most preferably ten or more times the affinity.

Modifications to the steroid nucleus may be made at the positions marked in R in Fig. 8a and 8b ( $\alpha$ -substitution at the 7-, 9-, 12-, 14-, 16-, and 17-positions;  $\beta$ -substitution at the 8-, 11-, 15-, and 18-positions). Preferably, those substituents are hydrophobic substituents, e.g., methyl, ethyl, iso-propyl, chlorine, bromine, or iodine.

Modifications to 2-aryl benzothiophenes may be made at the 2'-, 3'-, and 6'-positions (Fig. 8c) in order to fill the  $\alpha$ - and  $\beta$ -face cavities of ER. Preferably substituents should be present in at least two of the following three positions: 3, 2', or 6' so that a perpendicular conformation between the B- and C-rings of the 2-aryl benzothiophene nucleus is enforced. This perpendicular conformation facilitates the positioning of the 2'-, 3'-, and 6'-substituents in the  $\alpha$ - and  $\beta$ -face cavities of ER.

In a manner analogous to the benzothiophene series, the affinity of other classes of non-steroidal ER ligands may be enhanced by substitution of small hydrophobic substituents at positions marked R2', R3', and/or R6' in Fig. 8C.

Preferably, the ligand produce in accordance with the invention fills at least one of the  $\alpha$ - and  $\beta$ -cavities of the ER without perturbing the remainder of the ER structure.

Another aspect of this invention reveals an unfilled hydrophobic cavity in the raloxifene/ER complex. Filling this cavity with hydrophobic substituents so as to exclude water will enhance binding affinity. This cavity may be filled by positioning a hydrophobic substituent on the ethoxyphenyl sidechain  $\alpha$  to the piperidinyl nitrogen atom of raloxifene. This hydrophobic substituent may be a linear alkyl or perfluoroalkyl group ( $-\text{CH}_3$  to  $-\text{C}_{10}\text{H}_{21}$ ,  $-\text{CF}_3$  to  $-\text{C}_{10}\text{F}_{21}$ ), benzyl ( $-\text{CH}_2\text{Ph}$ , or methylene cyclohexyl ( $-\text{CH}_2\text{C}_6\text{H}_{11}$ ).

In a third aspect of this invention, examination of the ER structure reveals that the hydroxyl group at position-3 of estradiol or position-6 of raloxifene form hydrogen bonding interactions with Glu-353 and Arg-394 (Fig. 5a and 5b). It is known that

replacement of the hydroxyl group at position-3 of estradiol or position-6 of raloxifene results in a decrease in affinity for the ER. The invention reveals the reason for this reduction in affinity: while one of the hydrogen atoms of the amino group forms a favorable hydrogen bonding interaction with Glu-353, the second hydrogen atom forms an unfavorable electrostatic interaction with Arg-394. Furthermore this invention reveals a method for enhancing the affinity of 3-amino analogs of estradiol and 6-amino analogs of raloxifene: replacement of one of the two hydrogen atoms of the amino group with an alkyl group to produce a secondary amino group. Alternatively, the amino group may be replaced with a guanidino group (Fig. 8e) which will pick up two additional hydrogen bonding interactions, the first is a salt bridge to Glu-353 and the second is a hydrogen bonding interaction with a backbone carbonyl group in residue Leu-387. Similar enhancement of affinity for the ER may be achieved by replacement of the guanidino group with a fused 2-aminopyrrole (Fig. 8e).

In a closely related aspect of this invention, an understanding is provided for the reduction in affinity for the ER seen in ether derivatives at either position-3 of estradiol or position-6 of raloxifene: electrostatic repulsion between the ether oxygen atom of the ligand and Glu-353 in the ER. This invention reveals a way of increasing the affinity of estradiol position-3 or raloxifene position-6 ether derivatives: replacement of the ether oxygen atom with an amino (NH) group.

In a fourth aspect of this invention, replacement of the 4-hydroxyl group of raloxifene will enhance affinity by picking up a second hydrogen bonding interaction between the amino group and a backbone carbonyl group in Gly-521 of the ER (Fig. 8d).

## **(2) Improved Selectivity**

The estrogen receptor has been found to have two discrete forms, known as ER $\alpha$  and ER $\beta$ . Furthermore the ratio of the  $\alpha$ - to the  $\beta$ -forms of the ER may vary

considerably in different cell and tissue types. Therefore it may be possible to dissociate desirable therapeutic effects from undesirable side effects of estrogen receptor ligands by designing ligands that selectively bind to one or the other isoforms of the estrogen receptor.

The  $\alpha$ - and  $\beta$ -forms of the estrogen receptor differ significantly in their primary sequence and slightly in their tertiary structure. As a consequence of these receptor differences, ligands may bind with different affinity to the two isoforms.

The present inventors have been able to isolate, differentiate and produce crystals for the ER $\alpha$ . From these crystals, the present inventors have determined the three dimensional structure to high resolution. Further, the inventors have created a partial homology model of ER $\beta$  based on the experimentally derived ER $\alpha$  coordinates. This partial ER $\beta$  homology model captures the essential differences in binding properties between ER $\alpha$  and ER $\beta$ . Based on a comparison of the experimental ER $\alpha$  coordinates and the partial homology model of the ER $\beta$ , the differences between the ER $\alpha$  and ER $\beta$  have been determined and using these differences, the ability of a ligand to bind to either the ER $\alpha$  and ER $\beta$  receptors or to both receptors can be predicted. Hence, if it is known that one tissue possesses solely one form of the estrogen receptor, then it is possible to confer a degree of tissue specificity to a ligand by designing the ligand to bind to that predominant form of the receptor. Advantageously, the ligands may be designed to specifically bind ER $\alpha$  or ER $\beta$ .

Furthermore, a detailed understanding of the different receptors enables the different behavior of a compound in different tissues to be understood, for example the estrogenic or anti-estrogenic behavior of raloxifen (RAL) dependence on the tissue in which it is active.

Thus, in a further aspect, the invention provides estrogen receptor ligand binding domain crystals for ER $\alpha$  and a partial homology model for ER $\beta$ . Specificity

of ligands for either the ER $\alpha$  and ER $\beta$  or even to a specific ratio of ER $\alpha$  to ER $\beta$  is also provided. The advantage of this is that tissue specificity is conferred to the ligand. Thus, the invention also provides ligands, particularly synthetic ligands of ER $\alpha$  and ER $\beta$  together with methods for their design.

The present invention provides new ligands which exploit these differences by positioning ligand substituents in close proximity to one or more amino acid residue that differ between the  $\alpha$ - and  $\beta$ -isoforms of the ER.

The ligands produced in accordance with the invention bind more effectively to either the  $\alpha$ - or  $\beta$ -isoforms of the ER. The selectivity of the binding between the  $\alpha$ - or  $\beta$ -isoforms may be ten-fold, more preferably one hundred-fold, and most preferably greater than one thousand-fold.

For example, in the  $\beta$ -face cavity of ER- $\alpha$ , the amino acid residue at position-384 is Leu (sidechain volume = 76.6 Å<sup>3</sup>) whereas in the corresponding position of ER- $\beta$ , the amino acid residue is Met (sidechain volume = 79.3 Å<sup>3</sup>). Therefore the  $\beta$ -face cavity of ER- $\beta$  is smaller. Consequently ER- $\alpha$  selectivity may be enhanced by positioning substituents larger than a methyl group in the  $\beta$ -face cavity in close proximity to residue-384. Interaction between the ligand and residue-384 may be enhanced by introducing substituents at the  $\beta$  8-, 15-, or 18-positions on the steroid nucleus.

In the  $\alpha$ -face cavity of ER- $\alpha$ , the amino acid residue at position-421 is Met (sidechain volume = 79.3 Å<sup>3</sup>) whereas in ER- $\beta$ , it is Ile (sidechain volume = 77.3 Å<sup>3</sup>). Therefore the  $\alpha$ -face cavity of ER- $\alpha$  is smaller. This difference may be exploited to produce  $\beta$ -selective compounds through substitutions larger than a methyl group at the  $\alpha$  14-, 16-, or 17-positions of the steroid nucleus.

Similarly, substitutions may be made from either the 2'- or 3'-positions of the 2-arylbenzothiophene nucleus to interact with residue-384 in the  $\beta$ -face cavity or from

the 6'-position to interact with residue-421 in the  $\alpha$ -face cavity (Fig. 9a and 9b). However free rotation about the C2-C1' bond will effectively interchange the substituents at the 2'- and 6'-positions thereby reducing selectivity. Moving the hydroxyl group from position-4' (Fig. 9a) to position-5' (Fig. 9b) will bias the binding orientation such that the R<sub>2</sub> substituent will be positioned in the  $\beta$ -face pocket and the R<sub>6</sub> substituent in the  $\alpha$ -face pocket. This bias results from the fact that only one of the two possible rotamers about the C2'C1' bond will allow hydrogen bond formation between the 5'-hydroxyl group and the receptor residue His-524.

This invention also provides a means of enhancing the selectivity of other classes of non-steroidal ER ligands. In a manner analogous to the benzothiophene series of ER ligands, substituents larger than methyl may be introduced at either the R2' or R3' positions to produce ER- $\alpha$  selective compounds or at R<sub>6</sub>' to produce ER- $\beta$  selective compounds (Fig. 8c).

Substitutions may be made from position-3 of the steroid nucleus or position-6 of the benzothiophene nucleus to exploit the differences between ER- $\alpha$  and ER- $\beta$  at position-326 (Ile in ER- $\alpha$  and Val in ER- $\beta$ ) and at position-445 (Phe in ER- $\alpha$  and Tyr in ER- $\beta$ ).

This invention also provides a means for producing specifically ER- $\alpha$  selective ligands. A six atom linker between the hydroxyl group at position-3 of the A-ring of estradiol or at position-6 raloxifene and an aromatic or heteroaromatic ring on the sidechain will position the sidechain ring in close proximity to residue-445 (Fig. 9c). The edge of ER- $\alpha$  Phe-445 and the face of the sidechain ring can form a favorable " $\pi$ -teeing" interaction. This favorable interaction is not possible with the ER- $\beta$  Tyr-445, therefore analogs of this type will be ER- $\alpha$  selective (Fig. 9d).

Another aspect of this invention provides a means of further enhancing ER- $\alpha$  selectivity. Introduction of a carboxylate or amino group on the meta or para position of the above mentioned aromatic or heteraromatic ring will form a hydrogen bonding

interaction between the conserved Glu-323 or Lys-449 (Fig. 9e). Alternatively, the heteroaromatic ring may be a pyridone ring which will simultaneously form favorable hydrogen bonding interactions with both Glu-323 or Lys-449 (Fig. 9f). Either of the amino, carboxylate, or pyridone ring substitutions will reinforce the favorable " $\pi$ -teeing" interaction between the aromatic or heteroatomic ring of the ligand and Phe-445 in ER- $\alpha$ .

### (3) Modulation of Efficacy

This invention provides an understanding of the differences between estrogen and antiestrogen binding and therefore a means to design ER ligands with the desired degree of efficacy. An examination of the differences between the ER/estradiol and ER/raloxifene complexes reveals a large movement in Helix-12 (H12, Fig. 6). H12 adopts an "agonistic" conformation defined by the structure of the ER/estradiol complex and an "antagonistic" conformation defined by the structure of the ER/raloxifene complex. These two conformations are in thermodynamic equilibrium. When the ER is complexed with a full agonist, such as estradiol, the equilibrium lies far in the direction of the "agonistic" conformation. In contrast, while when complexed with an antagonist, the equilibrium is pushed in the direction of the "antagonistic" conformation. In the case of raloxifene, the large sidechain at position-3 sterically collides with H12 in its agonistic conformation, thereby driving the equilibrium strongly in the antagonistic direction. By introduction of progressively shorter sidechains at position-3 of raloxifene, the equilibrium will be gradually shifted back towards the agonist conformation. Thus, this invention provides a means of developing ligands with the desired degree of efficacy (agonist, partial agonist, or antagonist).

In particular, the importance of H12 has been determined as playing a central role in determining the efficacy (agonism vs. antagonism) of a ligand. Thus, ligands which are able to bind to and/or alter the conformation of H12 are of particular importance when designing a ligand or assessing the binding of a ligand, for the

estrogen receptor.

The present inventors have also found the reason why raloxifene has a different binding conformation to that of estradiol, the distinction lying in its active conformation but being unpredictable by virtue of its antagonistic action. The antagonism has been shown, by the present inventors, to be caused by a protruding portion on the raloxifene molecule which causes a large displacement of H12 relative to its conformation in the ER/estradiol complex.

Additionally, it has been found that at least the majority of such receptor proteins are in the form a dimer. Such dimerization leads to a potential route for disruption. Disruptions of this type can be used to predict antagonism or to produce antagonists. Disruptions may take the form of ligand binding which alters the conformation of the helices that comprise the dimerization interface or direct binding to the dimerization interface which then inhibits dimerization.

Further, the orientation of the ligand may be keyed to the receptor, in the dimeric or monomeric form. Furthermore, using the crystals of the present invention, the influence of ligand binding to the LDB on the receptor conformation can now be shown to have influences on the behavior of the receptor since it may disrupt the binding of co-activator, co-repressor, or heat-shock proteins. Previously, such predictions could not be made.

### **Production of estrogen receptor crystals and their application.**

Preferably, the crystal is produced from a sequence comprising at least one hundred and fifty amino acids of the selected estrogen receptor. More preferably, the sequence comprises at least two hundred amino acids. Most preferably, the sequence comprises at least two hundred and fifty amino acids. Preferably, the sequence comprises at least a portion of the ligand binding domain of the estrogen receptor.

More preferably, the sequence comprises the whole ligand binding domain of the estrogen receptor.

Typically ER LBDs are purified to homogeneity for crystallization. Purity of ER LBDs is measured with SDS-PAGE, mass spectrometry, and hydrophobic HPLC. The purified ER for crystallization should be at least 97.5% pure, preferably at least 99.0% pure, and most preferably at least 99.5% pure.

Preferably, the crystals used can withstand exposure to X-ray beams used to produce the diffraction pattern data necessary to solve the X-ray crystallographic structure. For example, crystals grown using estrogen receptor sequence bound to a various of ER ligands have been found to decompose during exposure to X-ray beams at room temperature, whereas crystals grown using estrogen receptor sequence bound to various ER ligands are freezable and are able to withstand exposure to X-ray beams.

Advantageously, the crystals have a resolution determined by X-ray crystallography of less than 3.5 Å and most preferably less than 2.8 Å. Preferably crystals grown using naturally occurring estradiol have an effective resolution of lower than 3.1 Å and crystals grown using raloxifene have an effective resolution of lower than 2.6 Å.

The production of such crystals has enabled the three dimensional structure of the ligand binding domain of the estrogen receptor to be mapped. Use of such crystals in conjunction with the map enables a better understanding of how estradiol and other estrogen bind to the estrogen receptor with precision. This technique can also enable the design of estrogen antagonists since the binding site is known.

For example, in the prior art it has been proposed (see Grease *et al.*, *J. Med. Chem.* (1997), 40:146-147) to prepare raloxifene analogues using a number of substitutions to the 2-aryl group, one of which is 2-naphthyl and shows efficacy in

preventing bone loss at the expense of a loss of binding affinity using, for example a 4'-OH substituent (resulting in a slight affinity loss compared to just a naphthyl). Having mapped the estrogen receptor, upon reviewing Formula X below, the fit of such a compound into the estrogen binding site comes intuitively apparent, that is, an amalgamation of the D-ring of estradiol and the pendant position-2 aryl substituent, but using the map, the present inventors have found that a 6'-OH, or even a 5'-OH will be more favorable for affinity.

For example, use of such methods has allowed the present inventors to determine the different binding modes of different steroid hormones to the estrogen receptor such as how the binding of testosterone to the estrogen receptor, which is imperfect binding, differs from that of estradiol. In particular, such models show that there is (1) electrostatic repulsion between the C-3 carbonyl oxygen atom of testosterone and the carboxylate of Glu-353 and (2) steric repulsion between the side chain of the C-18 methyl group of testosterone and the side chain of Leu-387 which accounts for the much lower affinity of testosterone compared to estradiol for the estrogen receptor. The steric hindrance and other stereochemical features of molecules has been found to affect the flexibility, that is the ability to alter the tertiary structure, of the ligand binding domain which therefore affects the perturbability of the ligand binding domain. Therefore, using the crystals of the present invention it is now possible for it to be clearly seen how estradiol binds to the estrogen receptor and hence the structural reasons why a compound behaves as an estrogen can not only be understood but also predicted. This enables an understanding of the promiscuity of the estrogen receptor - its ability to bind a variety of structurally diverse ligands. This understanding can be applied to a greater or lesser extent to all steroid hormone receptors, especially the glucocorticoid receptor.

Crystals of the estrogen receptor binding domain can be used as models in methods for the design of synthetic compounds intended to bind to the receptor. Such models show why very slight difference in chemical moieties of a ligand potentially have widely varying binding affinities. Hence, the three dimensional structure of the

ligand binding domain can be used a pharmaceutical model for compounds which bind to estrogen receptors.

Embodiments of the invention will now be described in more detail, by way of example only, with reference to the accompanying drawing Figure 1 to 23 of which:

Figure 1a shows representative portions of a 2.6 Å resolution multicrystal averaged map for a RAL-ER-LBD complex;

Figure 1b is a 3.1 Å resolution six-fold averaged map for a E2-ER-LBD complex. In both Figure 1a and Figure 1b, the map is contoured at 1F and superimposed on the final, refined models;

Figure 2a is a schematic representation of the ER- LBDa indicating the locations of the various secondary structural elements " and  $3_{10}$  helices are coloured grey, extended regions are very light grey and coil regions are coloured in dark grey. E2 is coloured very dark grey and is highlighted in space-filling form;

Figure 2b is a topology diagram for ER-LBD. Helices are represented as rectangles and  $\beta$  strands as arrows. The central core layer (H5,H6,H9 and H10 - striped) is sandwiched between the outer flanking layers (H1- 4) (H7, H8 ,H11). The structural elements which flank the layered motif (S1/S2 and H12) are S1, S2, H12 and are cross hatched. The N and C termini are also labelled. All secondary structural elements have been numbered in keeping with the nomenclature that has been established for other known nuclear receptor LBDs;

Figure 3a is a stereoview of the ligand binding cavity. The cavity is viewed in a similar orientation to that given in Fig. 1a. Sidechains for residues that line the cavity are illustrated. Hydrophobic residues are shown in grey, basic residues are shown as spotted and acidic residues are shown in hatched. E2 is coloured black (core) and

dark grey (terminal hydroxyl groups);

Figure 3b is a schematic representation of the ligand binding cavity. Residues that make direct hydrogen bonds to the hydroxyl radius are shown in ball-and-stick representation along with hydrophobic residues that make non-polar interactions with E2 (shown as grey with radial spokes). The atom names and ring nomenclature of E2 are also given;

Figure 3c is a representation of the molecular volume of E2 (dark grey dotted surface) and the accessible binding cavity volume (light grey dotted surface);

Figure 4a is a schematic representations of the ER- $\alpha$  LBD non-crystallographic dimer viewed perpendicular to the dimer axis. The N and C termini are labelled;

Figure 4b is a view of the dimer of Fig. 4a along the dimer axis. E2 is highlighted in mid grey in space-filling form. Helices that are involved in the dimer interface are labelled;

Figure 4c is a view showing the H11 helices that form the backbone of the dimer interface. Interacting residues are show coloured according to polarity (grey -hydrophobic residues; hatched - polar residues; cross-hatched - basic residues);

Figure 5a is a schematic representation of the binding cavity and interactions made by E2. The figure was produced using LIGPLOT software;

Figure 5b is a comparison of the E2 and RAL binding modes (E2 - dark grey; RAL - light grey);

Figure 6 is a schematic representation of the ER-LBD showing the different positioning of helix 12 in the E2 (cross-hatched) and RAL (hatched) complexes. The remainder of the ER-LBD is shown in grey. Dashed lines indicate unmodelled regions

of the structure. The helices which interact with H12 in the two complexes are marked; and

Fig. 7 is a space filling representation of a) an E2 complex and b, an RAL complex. H12 (black) is positioned over the hormone binding cavity in the E2 complex. Raloxifene induces a conformational change so that H12 occupies a hydrophobic groove between H3 and H5. The hydrophobic sidechains of all residues that lie between residues 354 (H3) and 380 (H5) are drawn in dark grey. Other highlighted residues are Lys362 (hatched), Glu380 and Tyr537 (cross-hatched), Asp351 (spots) and the ligand RAL (grey). The remaining atoms of the LBD monomer are white. Note that differences in other parts of the ER-LBD complexes may be due regions missing from the current models;

Fig. 8 shows the structure of several representative estrogen receptor ligands;

Figs. 8a, 8b and 8c show modifications made to the steroid nucleus of ligands which bind to the estrogen receptor;

Figs. 8d and 8e show how affinity of the ligand can be enhanced by adding substituents; and

Figs. 9a-9f show selectivity enhancement by using different substituents on the estrogen receptor ligand; and

Figs. 10 to 19 show by way of structural formulae the chemical reactions involved in the following Examples 1 to 51, which are non-limiting and given by way of illustration only.

Figure 20 shows crystal coordinates for estrogen receptor alpha (ER $\alpha$ ) binding domain in complex with raloxifene.

Figure 21 shows crystal coordinates for estrogen receptor alpha (ER $\alpha$ ) binding domain in complex with 17-beta-estradiol.

Figure 22 shows a homology model of estrogen receptor alpha (ER $\alpha$ ) beta complexed with raloxifene.

Figure 23 shows a homology model of estrogen receptor-beta (ER $\beta$ ) complexed with estradiol.

## EXAMPLE 1

### Materials

#### Protein purification and crystallisation of the oestrogen receptor $\alpha$

The human EP-LBD- $\alpha$  was over expressed in *Escherichia coli*. (Hegy G.B. et al Steroids (1961 61 June 367-373). Fermentation was carried out as batch and fed batch cultivation in a defined glycerol/salt medium at 30°C. Production of recombinant protein was induced by raising the temperature to 39°C. After 2 h, cells were harvested by centrifugation, and frozen, thawed cells were disrupted by a Bead Beater homogenizer (6 x 22 sec., with a 3 min resting time between bursts) (Biospec. Bartlesville, OK, USA), at 0°C, in 100 mM Tris-HCl (pH 7.8), 100 mM KCl, 10% glycerol, 4mM EDTA, 4 mM DTT, 5 $\mu$ g/ml antipain. For a fermentation volume of 1200 ml, 250 ml buffer was used with 210 ml acid washed glass beads (212-300 microns). After centrifugation, the supernatant was applied to a column of estradiol-Sepharose Fast Flow, 25 ml. (Greene G. et al Proc Natl Acad Sci USA (1980) 77,5115-5119. The column was first washed with 130 ml 10 mM Tris-HCl. (pH 7.8), 700 mM KCl, 1 mM EDTA, followed first by 130 ml 10 mM Tris-HCl (pH 7.8), 250 mM NaSCN, 10% dimethyl-formamide, 1 mM EDTA and then by 110 ml 10 mM Tris-HCl pH 8.0. Reactive Cys residues were modified by washing the column with 120 ml 30 mM Tris-base, 15mM iodoacetic acid, pH 8.1. Excess reagent was washed out by 50 ml Tris-base, 15 mM iodoacetic acid, pH 8.1. Excess reagents was washed

out by 50 ml 10 mM Tris-HCl pH 8.0 followed by 20 ml 10 mM Tris-HCl, pH 7.8, 250 mM NaSCN, 10% dimethylformamide, 1 mM EDTA. The ET-LBD- $\alpha$  was eluted by including 100  $\mu$ M of the desired ligand to the last buffer. The fractions containing ER-LBD- $\alpha$  was pooled (65 ml) and concentrated (Centriprep 30, Amicon) to 4 ml. Final purification was achieved using a Bio-Rad 491 preparative PAGE instrument according to the user manual. Using one dilution of the Ornstein/Davies buffer system. The stacking (0.7 cm) and resolving (70 cm) gels was 5.6% (acrylamide/bis). The elution buffer was 10mM Tris-HCl pH 8.0 and the electrophoresis was carried out at 12 W. Fractions containing ER-LBD- $\alpha$  was pooled and concentrated (Centriprep 30) to the desired protein concentration.

### **Data collection, phasing and refinement**

#### **ER-LBD- $\alpha$ -RAL complex:**

A native dataset was collected from a single frozen crystal on beamline X11 at the DESY/Hamburg ( $\lambda=0.905\text{\AA}$ ). Diffraction data were recorded at 120K with a 30cm Mar Research image plate located at a crystal-to-detector distance of either 245mm or 390mm. Heavy atom derivatives were collected in-house (York) from flash frozen crystals. Data were integrated and reduced using the programs DENZO and SCALPACK. MIR analysis was performed using the CCP4 suite of programs (Table 2). Diffraction data for the alternate C2 (York) and C2221 (DESY, Hamburg) crystal forms were collected to resolutions of 3.0 $\text{\AA}$  and 3.1 $\text{\AA}$  respectively. Initial phases were calculated to 3 $\text{\AA}$  using MLPHARE and subsequent two-fold averaging, non-crystallographic matrix refinement and phase extension were carried out using DM. An initial polyalanine trace was used to generate a dimeric search model, using the refined non-crystallographic symmetry and correctly positioned in the alternate C2 and C2221 crystal forms using molecular replacement (AmoRe) Collaborative Computational Project No. 4. (The CCP4 Suite: programs for protein crystallography. Acta Cryst D50, 760-763 (1994)). Twenty cycles of cross crystal averaging between all three crystal forms was carried out with DMMULTI (Supra and Cowtan, K, dm: An automated procedure for phase improvement by density modification. In Joint

CCP4 and ESF-EACBM Newsletter on Protein Crystallography 31 PP 34-38 (1994)) using only the MIR phase information. The resultant electron density maps showed no bias towards the input model and enabled the unambiguous tracing of the remainder of the molecule and the assignment of most of the amino acid sequence. Refinement was performed with REFMAC using bulk solvent and anisotropic scaling (Murshudou et al Acta Cryst D53, 240-255 (1997)). Tight non-crystallographic restraints were maintained during the initial cycles but were loosened in the final stages of refinement. Individual atomic temperature factors were refined isotropically. Residues Asp332, Phe337, Lys416, Lys467, Ser468, Leu469, Glu470 and Glu471 were poorly resolved in the electron density maps and not modelled beyond their C  $\alpha$  atoms.

#### **ER-LBD- $\alpha$ -E2 complex:**

Diffraction data were collected at room temperature from a single ER-LBD-E2 crystal using an 128cm Mar Research image plate located at a crystal-to-detector distance of 280mm on beamline BW7AB at the DESY/Hamburg ( $\lambda=0.916\text{\AA}$ ). Initial phase estimates were obtained with AMoRe using the refined ER-LBD RAL dimer (truncated after Met528) as a search model. All data between 15 and  $4\text{\AA}$  were used for the rotation and translation functions and in the cross-rotation function model Patterson self-vectors were selected within a radius of  $30\text{\AA}$ . The correct solution, corresponding to three ER-LBD dimers, had a correlation coefficient of 69.8 and an R-factor of 40.6 after AMoRe rigid-body refinement. Six-fold averaging was performed using DM and the structure was refined with REFMAC using tight non-crystallographic restraints, bulk solvent and anisotropic scaling and averaged phases from DM. A single, overall B value was applied in the early stages of refinement until the R<sub>free</sub> converged. Subsequent cycles employed tightly constrained, full isotropic B value refinement. All model building was carried out using the graphics package QUANTA (Molecular Simulations, Inc. San Diego). The sidechains of Leu306, Leu466, Leu 469, Lys492, Lys531 and Leu346 were poorly resolved in the electron density maps and not modelled beyond their C  $\alpha$  atoms.

**TABLE 1****Data collection and refinement statistics**

	ER-raloxifene	ER-estradiol
Space group	C2	P21
Unit cell dimensions		
a (Å)	104.53	61.48
B (Å)	53.68	115.16
C (Å)	102.71	137.38
$\beta$ (°)	116.79	103.01
No. of molecules / AU	2	6
Resolution (Å)	25 - 2.6	20 - 3.1
No. unique reflections	15,497	34,025
Completeness (%)	94.6	99.1
Multiplicity	4.5	2
Rsym (I)	8	10
Reflections used in refinement	13,868	30,583
Rcryst	23.98	22
Rfree	30.4	25.3
Non H atoms	3,741	11,508

Water	66	126
% A.B.L (a,b,l,p)	92.4 (7.6)	93.0 (7.0)
Rmsd bond length (Å)	0.01	0.01
Rmsd bond angle (Å)	0.04	0.03
Average B protein (Å <sup>2</sup> )	48.3	37.8
Rmsd NCS protein (Å)	0.57	0.08
Rmsd NCS B (Å <sup>2</sup> )	8.2	1.1

$R_{\text{sym}}(I) = 100 \times \frac{\sum_i G_i |G_{hi} - \langle I \rangle|}{\sum_i G_i I_{hi}}$  where  $I$  is the observed intensity.  $\langle I \rangle$  is the average intensity of multiple observations of symmetry related reflections.

$R_{\text{cryst}} = 100 \times \frac{\sum_i |F_o| - |F_c|}{\sum_i |F_o|}$

$R_{\text{free}}$  is the same as  $R_{\text{cryst}}$  but was calculated using a test set of reflections (10% of the whole dataset) that was excluded from the refinement process.

R.m.s. deviation in bond length and the angle distances from Engh and Huber ideal values

R.m.s. distance between all non-crystallographic symmetry (NCS) related atom positions

R.m.s. difference between all non-crystallographic symmetry (NCS) related atomic temperature factors.

**TABLE 2**

**Heavy atom data collection and MIR statistics**

Dataset	PCMBS-1	PCMBS-2	KAuCN
Resolution (Å)	20 -3	20 -3	20 -3.6

No. unique reflections	10,335	9,316	5,835
Completeness (%)	97.6	89	94.2
Multiplicity	4	3.1	2.5
Rsym (I)	8.1	9.2	7
Conc. reagent (mM)	4	4	4
Soak time (days)	5	14	2
Resolution (Å)	20 -3	20 -3	20 -3.6
Riso	16.9	20.7	13.7
No. of sites	2	2	1
Cullis R (centric / acentric)	0.75/0.68	0.76 / 0.66	0.90 / 0.85
Phasing power (centric / acentric)	1.22 / 1.88	1.23 / 2.02	0.71 / 0.94
F.O.M (20 - 3Å) (centric / acentric / overall)		0.67 / 0.48 / 0.49	

Cullis R =  $E1E1/G11F_{PH} 1-1FP_p11$  for centric (c) and acentric (a) reflections. F.O.M =  $\langle EP(\alpha)e^{i\alpha}/EP(\alpha) \rangle$  where  $\alpha$  is the phase and  $P(\alpha)$  is the phase probability distribution.  
Phasing power.

## EXAMPLE 2

### ER -E2 crystallisation

Prior to crystallisation protein was buffer exchanged to 20 mM using Tris/HCl buffer at pH 7.8 and concentrated to 12-13 mg/ml. Crystals were grown by vapour diffusion using hanging and sitting drop techniques. The best crystals were obtained using 2.4 M Ammonium formate or 80-90 mM Magnesium formate as precipitants buffered with 0.1 M Tris/HCl buffer. 4 M Ammonium formate or 200 mM Magnesium formate unbuffered stock solutions were used. Magnesium formate stock solution was kept at 4°C and filtered before use. The optimum pH ranged from 7.9 to 8.3 with the best crystals growing at pH 8.1. Protein concentration in the drop was 8 mg/ml although X-ray suitable crystals were also obtained at 13 mg/ml. However, crystals obtained from such conditions were very often twinned and the addition of DMSO at up to 8% significantly improved their quality. The size of the crystals was correlated with the size of the sitting/hanging drop. The optimum size of the drop was achieved by mixing 2.5 ml of protein with 2.5ml of the reserved solution. All crystallisations were performed at 18°C. The best crystals, with a size of 0.5x0.05x0.05 mm<sup>3</sup>, were mounted in the X-ray quartz capillaries.

### ER- $\alpha$ -Raloxifen (ER-R) crystallisation

After purification as before, the protein buffer was replaced with 20 mM Tris/HCl pH 7.8-7.9 and the protein was concentrated usually to 10-12 mg/ml. The vapour diffusion method with the hanging drop technique was used for crystallations. The best conditions for crystallisation used the following medium: 0.1 M Tris/HCl buffer pH 8.3, 12% (w/v) of PEG 4000, 0.1 M Maltose, 50 mM Lysine, 0.2 M MgCl<sub>2</sub>, 5% dioxane. The concentration of the protein solution used for crystallisation was brought up to 7.3-7.5 mg/ml by dilution with 20 mM Tris/HCl buffer pH 8.3. Crystallisations were performed with different drop sizes and protein-to-reservoir buffer ratios. The

best crystals were grown from drops obtained by mixing 2 ml of protein with 2 ml or 3 ml of well buffer. The best temperature for crystal growth is 18°C. These conditions yielded the main C2 crystal form ( $a=104.53\text{\AA}$   $b=53.68\text{\AA}$   $c=102.71\text{\AA}$   $b=116.79\text{\AA}$ , in the shape of monoclinic plates ( $0.1\times0.1\times0.02\text{ mm}^3$ )), which was subsequently used for heavy atoms derivatives searches and structure refinement.

By subtle manipulation of the above conditions other crystal forms were also produced. The lowering of the PEG 4000 concentration to 10-11 % w/v resulted in other C2 crystal form:  $a=89.9\text{\AA}$   $b=75.09\text{\AA}$   $c=87.50\text{\AA}$   $b=103.01\text{\AA}$ . These crystals grow at 18°C as single pyramids and despite their severe twinning it was possible to separate mechanically small untwinned fragments of the crystals suitable for X-ray data collection.

The alteration of other conditions, for example increase of dioxan concentration from 5 to 7.5 and 10% and replacement of 50 mM Lys by 50 mM Arg, 0.1 M Maltose by 0.1 M Sucrose or Glucose, produced C2221 orthorhombic crystal form:  $a=65.47\text{\AA}$   $b=95.99\text{\AA}$   $c=164.14\text{\AA}$ . Crystals reached the size of  $0.2\times0.03\times0.03\text{ mm}^3$  and they were growing preferably at 18°C.

It is also possible to obtain crystals of SeMet derivative or ER-R complex. They can be grown from conditions typical for the main C2 crystal form, but the concentration of dioxan is raised usually up to 7.5%. These crystals were very fragile and give poor quality X-ray data: which was used as additional information for positioning Met residues only.

All ER-RAL complex crystal forms were suitable for flash-cooling by using a stream of  $\text{N}_2$  at 100 K and 120 K. In all cases, the cryoprotectant consisted of mother liquor (well buffer composition) and 25% v/v MPD.

Owing to the sensitivity of the ER-R crystals all heavy atoms soaks were done in the exact mother liquor (taken from the well buffer) and the heavy atoms compounds were

always dissolved as a solid substance in these solutions. PCMBS-1 and KAuCN soaks were done for three days, PCMBS-2 for three weeks. All soaks done at 18°C. The cryo-solutions contained the heavy atom compounds at soaking concentration as well.

Pure ER-LBD is particularly refractive to crystallisation and suitable crystals were obtained after carboxymethylation of the three thiol groups.

### EXAMPLE 3

#### Structure Determination of the Estrogen Receptor $\alpha$ -Ligand Binding Domain

Crystals of the ER  $\alpha$ -LBD complexed with either estradiol or raloxifen will diffract to medium resolution, are monoclinic and contain either a single dimer in the case of raloxifen or three dimers in the case of estrogen in the asymmetric unit (see Table 1). Multiple isomorphous replacement was used to determine the crystal structure of the ER-LBD-RAL complex. An initial multiple isomorphous replacement/density modified electron density map showed the position of the non-crystallographic two-fold rotation axis and allowed an initial polyaniline trace to be built on the resultant two-fold averaged map. Subsequent averaging between three different crystal forms of the RAL complex enabled corrections to be made to the initial trace. The remainder of the protein as yet not being unambiguously traced and most of the amino acid sequence to be assigned. The resultant model had an R value of 43%. Cycles of maximum likelihood refinement and manual rebuilding yielded a final model with acceptable R values and geometric parameters. The initial phase estimates were obtained for the estradiol (E2) complex by molecular replacement using the ER-LBD RAL dimer as a search model. Rotation in translation functions yielded the correct solution. Six-fold averaging between the three dimers in the crystal line asymmetric unit allowed both the missing parts of the structure to be traced and the positioning of E2 in the binding cavity to be determined. The structure was refined using both tight non-crystallographic restraints as well as average phase information to yield a final model with an Rcryst of 22.0 and R3 of 25.3 for all data between 20 and 3.1 Å (Table 1).

## Results

The crystals produced in Example I and II were subjected to X-ray crystallographic studies which revealed that the LBD is folded into a characteristic "wedge-shaped" globular unit. It has a three-layered, anti-parallel  $\alpha$ -helical sandwich motif and is constructed from 8 major helices. The motif comprises a central core layer of 3 helices (H5/6, H9 and H10) sandwiched between two additional layers of helices (H2-3 and H7, H8, H11). The arrangement of structural elements in this fashion creates a "molecular scaffold" maintaining a sizable ligand binding cavity at the "toe end" of the wedge-shaped domain. The remaining secondary structural elements, a small two stranded anti-parallel  $\beta$ -sheet (S1 and S2) and helix H12, are located at the "ligand binding end" of the molecule and flank the main three-layered motif (see Figure 2). From the N-terminus, the chain follows one turn of the distorted  $\alpha$ -helix (H1), turns  $90^\circ$  and enters a short helix (H2) that lies parallel to the longest axis of the LBD. After helix H2, the chain continues in the same direction in an irregular extended conformation before tucking under the bottom of the molecule. At this stage, the chain turns back on itself through the long, bent, helix (H3). The N-terminal portion of this helix forms part of the ligand binding cavity. The sequence has a proline at position 365 which is invariable and it is at this residue that the main chain takes a sharp ( $90^\circ$ ) change in direction, passes through a  $3_{10}$  helix (H4) before forming the first of three central helices (H5/6). Helix H5/6 can be geometrically described as a single unit, although it is kinked by  $40^\circ$  at the alanine residue at position 382 in a manner such that its C-terminal end is correctly positioned to form part of the E2 binding cavity. This helix is kinked and is distinguishing and is maintained by a series of hydrophobic interactions between leucines at 378 and 379 (H5) with a phenol at 367 and leucine at 453 all of which are highly conserved and are part of the nuclear receptor LBD signature motif (Wurst). From this position the sequence passes through a small  $\beta$  hairpin (S1/S2) covering one side of the binding cavity, and emerges on the other side of the molecule via the  $3_{10}$  helix H7. Helix H8 runs three quarters of the way up the long axis of the LBD, passes through a second central helix (H9) before turning back via a disordered loop to form a final helix H10.

At the end of H10, the polypeptide backbone changes direction and runs the full length of the ligand binding domain, in an anti-parallel direction to H8 in the form of helix 11. After a short turn the chain emerges on the opposite side to the S1/S2  $\beta$  hairpin at helix H12, the core amphipathic helix of the AF-2 region.

## DIMERISATION

Crystallographic studies also reveal that the receptor is dimerised. ER is sequestered in an inactive complex with heat shock protein 90 (hsp90) and other accessory factors in the absence of E2. Ligand binding initiates the disassembly of this complex and results in receptor dimerisation via domain E. The ligand-bound form of ER exists as a tight homodimer in solution and ER-LBDs are arranged as non-crystallographic dimers within both the E2 and RAL complex crystals. This quaternary arrangement almost certainly reflects the physiological state of ER-LBD *in vivo* as all crystal forms of the liganded ER-LBD obtained to date contained non-crystallographic dimers. The dimer axis coincides with the longest axis of the LBD with each molecule tilted approximately 15° away from the two position fold. This symmetric arrangement generates a molecule with dimensions of approximately 55Å high by 50Å wide by 35-60Å breadth. The observed quaternary arrangement locates the N and C termini of each monomer on the opposite "faces" of the dimer. The C terminus of each monomer projects towards the dimer axis while the N termini are far removed from the interface. The dimerisation surface is fairly extensive and encompasses about 15% (1,703 Å<sup>2</sup>) of each monomer's accessible surface area. The LBD's are positioned so that the H8/H11 face of each monomer lines up to form an additional, intermolecular helical layer. Contacts between the two molecules are made primarily through the H11 helices, which intertwine to form a rigid backbone, but also involve H8 from one monomer and H9 and H10 from the neighbouring monomer. The H11 helices are arranged as a bifurcated coiled coil with the side chains of the residues Leu 504, Ala 505, Leu 508, Leu 509 and Leu 511 which are interdigitated to form a partial "leucine zipper" motif at the coils end terminal N. This hydrophobic patch is flanked on either side by a network of hydrogen bonding residues. Arg 545 and Asn 519 make direct

hydrogen bonds with Ser 512 and His 516 respectively. This overall monomer-monomer arrangement is unaffected by the nature of the ligand and seems to be maintained within the receptor super family. The observed ER-LBD dimer is identical in terms of gross monomer orientation and make up of the dimer interface to that of the crystallographic unliganded RXR- $\alpha$  homodimer (58% hydrophobic/42% hydrophilic).

The invariable nature of the LBD's quaternary structure therefore suggests that it provides a stable entity that facilitates separation of the two DNA binding domains in such a way as to allow optimal binding to EREs.

Such an elucidation of the 3-dimensional structure of the estrogen receptor ligand binding domain provides a useful tool for designing ligands for binding to the estrogen receptor. Such a detailed knowledge of the structure of the receptor enables prediction with accuracy whether a ligand binding to the receptor will act as an antagonist, a partial antagonist, an agonist or a partial agonist since the ligand-induced conformational changes can be anticipated.

#### **EXAMPLE 4**

##### **Partial Homology Model of ER $\beta$**

The coordinates obtained in Example 1 (ER $\alpha$  complexed with either estradiol or with raloxifene) were used to create two partial homology models of ER $\beta$  (complexed with estradiol and raloxifene respectively). This was accomplished by importing the ER $\alpha$  coordinates into version 6.4 of Sybyl (available from Tripos Associates, St. Louis, MO, U.S.A.). The "change" command in the Sybyl biopolymer module was used to mutate amino acids which differ between ER $\alpha$  and ER $\beta$  and which are in the vicinity of the ligand binding pocket. Four such residues were mutated: 1326V (Ile-326 to Val), L384M (Leu-384 to Met), M421I (Met-421 to Ile), F445Y (Phe-445 to Tyr). These partial ER $\beta$  homology models in conjunction with the experimental ER $\alpha$  coordinates were used to design isoform selective ligands as described in Example 5-51.

### Design of Ligands

Examples of ligands designed to fit the receptor have been produced as follows:

#### Example 5

##### 2-(2,6-dimethylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (1).

(a) To a solution of 6-methoxybenzo[ $\beta$ ]thiophene (Graham *et al*, *J. Med. Chem.*, **1989**, 32, 2548.) (6 g, 36.5 mmol) in 50 ml of anhydrous tetrahydrofuran at  $-60^{\circ}\text{C}$  was added n-butyllithium (20.5 ml, 41 mmol, 2.0 M solution in cyclohexane), dropwise via a dropping funnel. After stirring for 30 minutes, trimethyltin chloride (41 ml, 41 mmol, 1.0 M solution in hexanes) was introduced dropwise through a dropping funnel. The resulting mixture was allowed to warm to  $0^{\circ}\text{C}$ , stirred for 1 hour and then quenched with 100 ml of 1 M hydrochloric acid. The aqueous phase was extracted with ethyl acetate. The combined organic phases were dried over sodium sulphate and then concentrated in vacuo. This produced 9.24 g (28 mmol, 77%) of 2-trimethylstannyl-6-methoxybenzo[ $\beta$ ]thiophene as white semicrystals.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.66 (d,  $J = 8.6$  Hz, 1H), 7.34 (d,  $J = 2.2$  Hz, 1H), 7.29 (s, 1H), 6.95 (dd,  $J = 8.6$  Hz, 2.2 Hz, 1H), 3.86 (s, 3H), 0.39 (s, 9H).

(b) A mixture of 370 mg (2 mmol) 2-bromo-m-xylene, 115 mg (0.1 mmol) tetrakis triphenylphosphinepalladium (0) and 160 mg (2 mmol) of cupric oxide in 8 ml of *N,N*-dimethylformamide was stirred at  $100^{\circ}\text{C}$  under nitrogen. After 5 minutes, 981 mg (3 mmol) of 2-trimethylstannyl-6-methoxybenzo[ $\beta$ ]thiophene (example 1a) in 2 ml of *N,N*-dimethylformamide was added all at once to the reaction mixture. The reaction was heated for 2 hours and then allowed to reach room temperature. The resulting mixture was concentrated, dissolved in ethylacetate, filtered through a pad of silica and concentrated. The crude product was purified on a chromatotron (silica, 99:1, petroleum ether/ethyl acetate) producing 328 mg (1.22 mmol, 61%) of 2-(2,6-dimethylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene as yellowish crystals.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.89 (d,  $J = 8.7$  Hz, 1H), 7.32-7.59 (m, 4H), 7.23 (dd,  $J = 8.7$  Hz, 2.2 Hz, 1H), 7.18 (s, 1H), 4.12 (s, 3H), 2.46 (s, 6H).

(c) 145 mg (0.54 mmol) of 2-(2,6-dimethylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example 1b) was dissolved in 15 ml of dichloromethane, to the stirred solution was added boron trifluoride dimethylsulfide complex (1.5 ml). The solution was stirred at room temperature under nitrogen in the dark for 15 hours. The reaction mixture was quenched with 10 ml of water, extracted with dichloromethane, dried over magnesium sulphate and concentrated. The crude product was purified on a chromatotron (silica, 80:20, petroleum ether/ ethyl acetate) producing 94.1 mg (0.37 mmol, 69%) of 2-(2,6-dimethylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene as white crystals. MP 95-96°C. <sup>1</sup>H NMR (CDCl<sub>3</sub>) 7.63 (d, J = 8.6, 1H), 7.08-7.31 (m, 4H), 6.92 (s, 1H), 6.91 (dd, J = 8.6, 2.2 Hz, 1H), 4.91 (s, 1H), 2.20 (s, 6H).

#### Example 6

##### 2-(2-ethyl-6-methylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (2).

(a) The cross-coupling of 492 mg (2 mmol) 2-ethyl-6-methyliodobenzene, with 981 mg (3 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 99:1, petroleum ether/ ethyl acetate) producing 438 mg (1.55 mmol, 78%) of 2-(2-ethyl-6-methylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene as a colourless oil. <sup>1</sup>H NMR (CDCl<sub>3</sub>) 7.67 (d, J = 8.9 Hz, 1H), 7.08-7.36 (m, 4H), 7.01 (dd, J = 8.9 Hz, 2.2 Hz 1H), 6.96 (s, 1H), 3.89 (s, 3H), 2.54 (q, J = 7.6 Hz, 2H), 2.19 (s, 3H), 1.12 (t, J = 7.6 Hz, 3H).

(b) The deprotection of 100 mg (0.35 mmol) of 2-(2-ethyl-6-methylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example 2(a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 90:10, petroleum ether/ ethyl acetate) producing 69 mg (0.26 mmol, 73%) of 2-(2-ethyl-6-methylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene as white semicrystals. <sup>1</sup>H NMR (CD<sub>3</sub>OD) 7.59 (d, J = 8.7, 1H), 7.06-7.25 (m, 4H), 6.90 (s, 1H), 6.88 (dd, J = 8.7, 2.2 Hz, 1H), 2.51 (q, J = 7.6 Hz, 2H), 2.15 (s, 3H), 1.09

(t, J = 7.6 Hz, 3H).

#### Example 7

2-(2,6-dimethyl-4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (3).

(a) The cross-coupling of 402 mg (2 mmol) 4-bromo-3,5-dimethylphenol, with 981 mg (3 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 90:10, petroleum ether/ ethyl acetate) producing 210 mg (0.74 mmol, 37%) of 2-(2,6-dimethyl-4-hydroxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene as yellow crystals.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.88 (d, J = 8.7 Hz, 1H), 7.55 (d, J = 2.5 Hz, 1H), 7.22 (dd, J = 8.7 Hz, 2.5 Hz 1H), 7.14 (s, 1H), 6.83 (s, 2H), 4.94 (s, 1H), 4.11 (s, 3H), 2.38 (s, 6H).

(b) The deprotection of 100 mg (0.35 mmol) of 2-(2,6-dimethyl-4-hydroxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example 3(a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 80:20, petroleum ether/ethyl acetate) producing 52 mg (0.19 mmol, 54%) of 2-(2,6-dimethyl-4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene as white crystals. MP 202-204°C,  $^1\text{H}$  NMR ( $\text{CD}_3\text{OD}$ ) 7.56 (d, J = 8.7, 1H), 7.19 (d, J = 2.2 Hz, 1H), 6.86 (dd, J = 8.7, 2.2 Hz, 1H), 6.84 (s, 1H), 6.54 (s, 2H), 2.10 (s, 6H).

#### Example 8

2-(2-methylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (4).

(a) The cross-coupling of 340 mg (2 mmol) 2-bromotoluene, with 981 mg (3 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 99:1, petroleum ether/ ethyl acetate) producing 500 mg (1.97 mmol, 98%) of

2-(2-methylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene as white crystals.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.66 (d,  $J = 8.7$  Hz, 1H), 7.19-7.49 (m, 5H), 7.15 (s, 1H), 6.99 (dd,  $J = 8.7, 2.3$  Hz, 1H), 3.88 (s, 3H), 2.48 (s, 3H).

(b) The deprotection of 125 mg (0.49 mmol) of 2-(2-methylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example 4(a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 90:10, petroleum ether/ ethyl acetate) producing 60 mg (0.23 mmol, 47%) of 2-(2-methylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene as white crystals. MP 97-98°C,  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.63 (d,  $J = 8.4$  Hz, 1H), 7.18-7.48 (m, 5H), 7.14 (s, 1H), 6.91 (dd,  $J = 8.4, 2.3$  Hz, 1H), 4.86 (s, 1H), 1.56 (s, 3H).

#### Example 9

2-(2-chloro-6-methylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (5).

(a) The cross-coupling of 505 mg (2 mmol) 3-chloro-2-iodotoluene, with 981 mg (3 mmol) of product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 99:1, petroleum ether/ ethyl acetate) producing 439 mg (1.52 mmol, 76%) of 2-(2-chloro-6-methylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene as a yellow oil.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.68 (d,  $J = 8.7$  Hz, 1H), 7.15-7.36 (m, 4H), 7.03 (s, 1H), 7.01 (dd,  $J = 8.7, 2.2$  Hz, 1H), 3.88 (s, 3H), 2.25 (s, 3H).

(b) The deprotection of 100 mg (0.35 mmol) of 2-(2-chloro-6-methylphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example 5(a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 90:10, petroleum ether/ ethyl acetate) producing 44 mg (0.16 mmol, 46%) of 2-(2-chloro-6-methylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene as a yellowish oil.  $^1\text{H}$  NMR ( $\text{CD}_3\text{OD}$ ) 7.62 (d,  $J = 8.7$  Hz, 1H), 7.18-7.35 (m, 4H), 6.99 (s, 1H), 6.89 (dd,  $J = 8.7, 2.2$  Hz, 1H), 2.23 (s, 3H).

## Example 10

**2-(2-methylnaphth-1-yl)-6-hydroxybenzo[ $\beta$ ]thiophene (6).**

(a) The cross-coupling of 221 mg (1 mmol) 1-bromo-2-methylnaphthalene, with 491 mg (1.5 mmol) of product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 99:1, petroleum ether/ ethyl acetate) producing 159 mg (0.52 mmol, 52%) of 2-(2-methylnaphth-1-yl)-6-methoxybenzo[ $\beta$ ]thiophene as white crystals.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.66-7.88 (m, 4H), 7.30-7.48 (m, 4H), 7.11 (s, 1H), 7.04 (dd,  $J = 8.7, 2.2$  Hz, 1H), 3.91 (s, 3H), 2.40 (s, 3H).

(b) The deprotection of 110 mg (0.36 mmol) of 2-(2-methylnaphth-1-yl)-6-methoxybenzo[ $\beta$ ]thiophene (example (6a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 90:10, petroleum ether/ethyl acetate) producing 52 mg (0.18 mmol, 50%) of 2-(2-methylnaphth-1-yl)-6-hydroxybenzo[ $\beta$ ]thiophene as white semi crystals.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 8.60 (s, 1H) 7.87-8.05 (m, 2H), 7.74 (d,  $J = 8.7$  Hz, 1H), 7.65-7.71 (m, 1H), 7.38-7.54 (m, 4H) 7.18 (s, 1H), 7.02 (dd,  $J = 8.7, 2.2$  Hz, 1H), 2.39 (s, 3H).

## Example 11

**2-(2,5-dimethyl-4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (7).**

(a) The cross-coupling of 248 mg (1 mmol) 2,5-dimethyl-4-iodophenol, with 491 mg (1.5 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 9:1, petroleum ether/ ethyl acetate) producing 130 mg (0.46 mmol, 46%) of 2-(2,5-dimethyl-4-hydroxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene as white crystals.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 8.34 (s, 1H), 7.69 (d,  $J = 8.8$  Hz, 1H), 7.45 (d,  $J = 2.3$  Hz, 1H), 7.19 (s, 1H), 7.17 (s, 1H), 6.98 (dd,  $J = 8.8, 2.3$  Hz, 1H), 6.78 (s, 1H), 3.87 (s, 3H), 2.34

(s, 3H), 2.20 (s, 3H).

(b) The deprotection of 35 mg (0.12 mmol) of 2-(2,5-dimethyl-4-hydroxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example (6a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 70:30, petroleum ether/ ethyl acetate) producing 26 mg (0.096 mmol, 80%) of 2-(2,5-dimethyl-4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene as white crystals. MP 134-136°C, <sup>1</sup>H NMR (CD<sub>3</sub>COCD<sub>3</sub>) 8.41 (s broad, 2H) 7.63 (d, J = 8.7 Hz, 1H), 7.30 (d, J = 2.2 Hz, 1H), 7.18 (s, 1H), 7.13 (s, 1H) 6.93 (dd, J = 8.7, 2.2 Hz, 1H), 6.77 (s, 1H), 2.34 (s, 3H), 2.19 (s, 3H).

#### Example 12

##### 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (8).

Prepared according to (Hauser *et al*, WO 96/30361).

#### Example 13

##### 2-(2-benzylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (9).

The cross-coupling of 124 mg (0.5 mmol) 2-bromodiphenylmethane, with 246 mg (0.75 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was deprotected by the procedure set forth in example 1 (c). It was purified on a chromatotron (silica, 92:8, petroleum ether/ ethyl acetate) producing 108 mg (0.34 mmol, 68%) 2-(2-benzylphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene as slightly pink crystals. <sup>1</sup>H NMR (CD<sub>3</sub>COCD<sub>3</sub>) 8.55 (s 1H) 7.62 (d, J = 8.4 Hz, 1H), 7.04-7.51 (m, 11H), 6.93 (dd, J = 8.5, 2.5 Hz, 1H), 4.19 (s, 2H).

#### Example 14

## Example 14

**2-(4-hydroxynaphth-1-yl)-6-hydroxy[ $\beta$ ]thiophene (10)**

The cross-coupling of 119 mg (0.5 mmol) 1-bromo-4-methoxynaphthalene, with 246 mg (0.75 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was deprotected by the procedure set forth in example 1 (c). It was purified on a chromatotron (silica, 8:2, petroleum ether/ ethyl acetate) producing 9 mg (0.03 mmol, 6.2%) 2-(4-hydroxynaphth-1-yl)-6-hydroxy[ $\beta$ ]thiophene(10) as dark brown crystals.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 9.34 (s, 1H), 8.55 (s 1H), 8.31-8.38 (m, 1H), 8.20-8.27 (m, 1H), 7.72 (d, J = 8.4 Hz, 1H), 7.48-7.58 (m, 2H), 7.48 (d, J = 7.7, 1H), 7.37 (d, J = 2.2, 1H), 7.34 (s, 1H), 7.00 (d, J = 7.7, 1H), 6.98 (dd, J = 8.4, 2.2 Hz, 1H).

## Example 15

**2-(2-methyl-3-chlorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (11).**

The cross-coupling of 126 mg (0.5 mmol) 2-chloro-6-iodotoluene, with 246 mg (0.75 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was deprotected by the procedure set forth in example 1 (c). It was then purified on a chromatotron (silica, 92:8, petroleum ether/ ethyl acetate) producing 88 mg (0.32 mmol, 64.1%) of 2-(2-methyl-3-chlorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (11).  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.72 (d, J = 8.7 Hz, 1H), 7.29-7.41 (m, 2H), 7.27 (d, J = 2.5, 1H), 7.17 (d, J = 7.91, 1H), 7.10 (s, 1H), 6.92 (dd, J = 8.7, 2.5 Hz, 1H), 2.46 (s, 3H).

## Example 16

**2-(2-methyl-5-chlorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (12).**

The cross-coupling of 126 mg (0.5 mmol) 4-chloro-2-iodotoluene, with 246 mg (0.75 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was deprotected by the procedure set forth in example 1 (c). It was then purified on a chromatotron (silica, 92:8, petroleum ether/ethyl acetate) producing 88 mg (0.32 mmol, 64.1%) of 2-(2-methyl-5-chlorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (12).  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.63 (d,  $J = 8.7$  Hz, 1H), 7.43 (d,  $J = 2.0$  Hz, 1H), 7.27 (d,  $J = 2.2$ , 1H), 7.19-7.23 (m, 2H), 7.14 (s, 1H), 6.92 (dd,  $J = 8.5, 2.2$  Hz, 1H), 2.41 (s, 3H).

#### Example 17

##### 2-(2-methyl-4-chlorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (13).

The cross-coupling of 103 mg (0.5 mmol) 2-bromo-5-chlorotoluene, with 246 mg (0.75 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was deprotected by the procedure set forth in example 1 (c). It was then purified on a chromatotron (silica, 92:8, petroleum ether/ethyl acetate) producing 118 mg (0.43 mmol, 85.9%) 2-(2-methyl-4-chlorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (13) as slightly pink crystals.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 8.63 (s, 1H), 7.69 (d,  $J = 8.7$  Hz, 1H), 7.45 (d,  $J = 8.4$  Hz, 1H), 7.26-7.41 (m, 4H), 6.92 (dd,  $J = 8.4, 2.2$  Hz, 1H), 2.47 (s, 3H).

#### Example 18

##### 2-(2,5-hydroxy-4-bromophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (14).

The cross-coupling of 222 mg (0.75 mmol) 1,4-dibromo-2,5-dimethoxybenzene with 367 mg (1.125 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). It was then purified on a chromatotron (silica, 95:5, petroleum ether/acetone) producing 65.5 mg (0.17 mmol, 23%) of 2-(2,5-methoxy-4-bromophenyl)-6-methoxybenzo[ $\beta$ ]thiophene. 25 mg (0.066 mmol)

14.1 mg (0.042 mmol, 63.4%) of 2-(2,5-hydroxy-4-bromophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 8.84 (s, 1H), 8.54 (s, 1H), 8.33 (d,  $J = 8.74$  Hz, 1H), 7.81 (s, 1H), 7.69 (d,  $J = 8.4$  Hz, 1H), 7.34 (d,  $J = 2.2$  Hz, 1H), 7.28 (s, 1H), 7.14 (s, 1H), 6.92 (dd,  $J = 8.4, 2.2$  Hz, 1H).

#### Example 19

##### 2-(2-methyl-4-nitrophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (15).

(a) The cross-coupling of 432 mg (2.0 mmol) 2-bromo-5-nitrotoluene with 982 mg (3.0 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 8:2, petroleum ether/ ethyl acetate) producing 681 mg (about 75% pure) of 2-(2-methyl-4-nitrophenyl)-6-methoxybenzo[ $\beta$ ]thiophene.

(b) The deprotection of 100 mg (0.33 mmol) 2-(2-methyl-4-nitrophenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example (15a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 70:30, petroleum ether/ ethyl acetate) producing 73 mg (0.26 mmol, 78%) of 2-(2-methyl-4-nitrophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 8.16 (d broad,  $J = 2.1$  Hz, 1H) 8.08 (dd,  $J = 8.5, 2.1$  Hz, 1H), 7.68 (d,  $J = 8.5$  Hz, 1H), 7.60 (d,  $J = 8.5$ , 1H), 7.29 (d,  $J = 2.4$  Hz, 1H) 7.27 (s, 1H), 6.94 (dd,  $J = 8.5, 2.4$  Hz, 1H), 5.15 (s, 1H), 2.59 (s, 3H).

#### Example 20

##### 2-(2-methyl-4-aminophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (16).

50 mg (0.18 mmol) of 2-(2-methyl-4-nitrophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (example (15(b))) was dissolved in 5 ml of ethanol and 198 mg (0.88 mmol) of tin dichloride dihydrate was added. The mixture was heated to  $70^\circ\text{C}$  under a nitrogen

atmosphere for 3 hours. Hydrochloric acid (1 M) was added and then the aqueous phase was extracted with ethyl acetate. The combined organic phases were washed with brine, dried over magnesium sulphate and then concentrated in vacuo. The crude product was purified on a chromatotron (silica, 6:4, petroleum ether/ ethyl acetate) producing 22 mg (0.086 mmol, 48%) of 2-(2-methyl-4-aminophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CD}_3\text{OD}$ ) 7.54 (d,  $J = 8.6$ , 1H), 7.18 (d,  $J = 2.4$  Hz, 1H), 7.17 (d,  $J = 8.6$ , 1H), 7.00 (s, 1H), 6.84 (dd,  $J = 8.6$ , 2.4 Hz, 1H), 6.64 (d,  $J = 2.4$  Hz, 1H), 6.58 (dd,  $J = 8.6$ , 2.4 Hz), 2.37 (s, 3H).

#### Example 21

##### 2-(2-methyl-3-nitrophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (17).

(a) The cross-coupling of 432 mg (2.0 mmol) 2-bromo-6-nitrotoluene with 982 mg (3.0 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 95:5, petroleum ether/ ethyl acetate) producing 114 mg (0.38 mmol, 13%) of 2-(2-methyl-3-nitrophenyl)-6-methoxybenzo[ $\beta$ ]thiophene.

(b) The deprotection of 200 mg (0.67 mmol) 2-(2-methyl-3-nitrophenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example (17a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 70:30, petroleum ether/ ethyl acetate) producing 101 mg (0.35 mmol, 53%) of 2-(2-methyl-3-nitrophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 8.67 (s, 1H), 7.86 (dd,  $J = 8.0$ , 1.2 Hz, 1H), 7.76 (dd,  $J = 7.7$ , 1.2 Hz, 1H), 7.73 (d,  $J = 8.7$  Hz, 1H), 7.54 (m, 1H), 7.38 (d,  $J = 2.1$  Hz, 1H), 7.36 (s, 1H), 7.00 (dd,  $J = 8.7$ , 2.1 Hz, 1H), 5.15 (s, 1H), 2.52 (s, 3H).

#### Example 22

##### 2-(2-methyl-3-aminophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (18).

350 mg (1.23 mmol) of 2-(2-methyl-3-nitrophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene

(example (17(b))) was dissolved in 10 ml of ethanol and 1384 mg (6.1 mmol) of tin dichloride dihydrate was added. The mixture was heated to 70°C under a nitrogen atmosphere for 3 hours. Hydrochloric acid (1 M) was added and then the aqueous phase was extracted with ethyl acetate. The combined organic phases were washed with brine, dried over magnesium sulphate and then concentrated in vacuo. The crude product was purified on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) producing 27 mg (0.10 mmol, 8.1%) of 2-(2-methyl-3-aminophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CD}_3\text{OD}$ ) 8.93 (s, 1H broad), 7.65 (d,  $J = 8.8$ , 1H), 7.33 (d,  $J = 2.5$  Hz, 1H), 7.12 (s, 1H), 6.92-7.00 (m, 2H), 6.71-6.78 (m, 2H), 4.69 (s, 2H broad), 2.20 (s, 3H).

#### Example 23

2-(2-methyl-3-bromo-5-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (19).

(a) The cross-coupling of 369 mg (1.3 mmol) 2,6-dibromo-4-methoxytoluene with 636 mg (1.95 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 98:2, petroleum ether/ ethyl acetate) producing 220 mg (0.61 mmol, 46.6%) of 2-(2-methyl-3-bromo-5-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene.

(b) The deprotection of 70 mg (0.19 mmol) 2-(2-methyl-3-bromo-5-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example (19a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 8:2, petroleum ether/ ethyl acetate) producing 55 mg (0.16 mmol, 86%) of 2-(2-methyl-3-bromo-5-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 8.66 (s, 1H), 7.69 (d,  $J = 8.4$ , 1H), 7.34 (d,  $J = 2.2$  Hz, 1H), 7.23 (s, 1H), 7.15 (d,  $J = 2.5$  Hz, 1H), 6.99 (d,  $J = 2.2$  Hz, 1H), 7.00 (dd,  $J = 8.4$ , 2.2 Hz, 1H), 6.94 (d,  $J = 2.5$  Hz, 1H), 2.38 (s, 3H).

#### Example 24

**2-(2-methyl-5-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (20).**

a) 30 mg (0.08 mmol) of 2-(2-methyl-3-bromo-5-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example (19a)) was dissolved in 2 ml of tetrahydrofuran. The mixture was cooled to -70°C and butyllithium (0.12 mmol) was added to the reaction mixture. The reaction mixture was stirred for 2.5 hours at -70°C and then at room temperature overnight. The reaction mixture was quenched with aqueous ammonium chloride, extracted with ethyl acetate and dried over magnesium sulphate. This produced 30 mg of crude 2-(2-methyl-5-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene.

b) The deprotection of 30 mg (0.10 mmol) 2-(2-methyl-5-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thiophene (example (20a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on HPLC (reversed phase, C18, gradient, acetonitrile/water + 0.05 trifluoroacetic acid) producing 6.7 mg (0.026 mmol, 24%) of 2-(2-methyl-5-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thiophene. <sup>1</sup>H NMR (CD<sub>3</sub>COCD<sub>3</sub>) 8.55 (s, 1H), 8.29 (s, 1H), 7.67 (dd, J = 8.5, 2.2 Hz, 1H), 7.33 (t, 1H), 7.24 (d, J = 2.5, 1H), 7.13 (dd, J = 8.2, 2.0 Hz, 1H), 6.92-6.99 (m, 2H), 6.76 (dt, 1H), 2.35 (d, J = 2.2 Hz, 3H).

**Example 25****2-phenyl-6-hydroxybenzo[ $\beta$ ]thiophene (21).**

The cross-coupling of 157 mg (1.0 mmol) bromobenzene with 491 mg (1.5 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was deprotected by the procedure set forth in example 1 (c). It was purified on a chromatotron (silica, 9:1, petroleum ether/ ethyl acetate) producing 81 mg (0.36 mmol, 36%) 2-phenyl-6-hydroxybenzo[ $\beta$ ]thiophene. <sup>1</sup>H NMR (CD<sub>3</sub>COCD<sub>3</sub>) 8.65 (s 1H), 7.60-7.75 (m, 4H), 7.28-7.48 (m, 4H), 6.95 (dd, J = 8.5, 2.5 Hz, 1H).

## Example 26

2-(4-hydroxyphenyl)-benzo[ $\beta$ ]thiophene (22).

(a) The stannylation of 3 g (22.4 mmol) of benzo[ $\beta$ ]thiophene was accomplished by the procedure set forth in example 1(a). This produced 6.3 g (21.3 mmol) of 2-trimethylstannylbenzo[ $\beta$ ]thiophene.

(b) The cross-coupling of 468 mg (2.0 mmol) 4-iodophenol with 889 mg (3.0 mmol) of the product from 22(a) was accomplished by the procedure set forth in example 1(b). The crude product was deprotected by the procedure set forth in example 1 (c) and then purified on a chromatotron (silica, 9:1, petroleum ether/ ethyl acetate) and recrystallised (petroleum ether/ ethyl acetate) producing 20 mg (0.09 mmol, 4%) of 2-(4-hydroxyphenyl)-benzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 8.70 (s 1H), 7.88 (m, 1H), 7.79 (m, 1H), 7.56-7.69 (m, 3H), 7.25-7.38 (m, 2H), 6.90-7.00 (m, 2H).

## Example 27

2-(2-trifluoromethyl-6-fluorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene (23).

Produced in a parallel solution phase way. A mixture of 61 mg (0.25 mmol) 2-bromo-3-fluorobenzotrifluoride, 15 mg (0.013 mmol) tetrakis triphenylphosphinepalladium (0) and 20 mg (0.25 mmol) of cupric oxide in 1 ml of N,N-dimethylformamide was stirred at 100°C under nitrogen. After 5 minutes, 123 mg (0.38 mmol) of 2-trimethylstannyl-6-methoxybenzo[ $\beta$ ]thiophene (example 1(a)) in 2 ml of N,N-dimethylformamide was added all at once to the reaction mixture. The solution was heated to 100°C for 3 hours, concentrated on a speed-vac, dissolved in dichloromethane, filtered through a silica pad and then concentrated again. The product was dissolved in 1.5 ml of dichloromethane and 1 ml of boron trifluoride dimethylsulfide complex was added. The reaction mixture was stirred overnight in darkness, quenched with water and extracted with dichloromethane. The organic phase

was dried by passing it through sodium sulphate drying tubes and then it was concentrated in a speed-vac. The crude product was purified on HPLC (silica, n-heptane + 0.5% acetic acid to ethyl acetate + 0.5% acetic acid as gradient eluent) producing 1.5 mg (0.005 mmol, 2%) of 2-(2-trifluoromethyl-6-fluorophenyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 8.72 (s, 1H broad), 7.71-7.78 (m, 3H), 7.55-7.65 (m, 1H), 7.37 (d,  $J = 2.2$  Hz, 1H), 7.29 (s, 1H), 6.99 (dd,  $J = 8.7, 2.2$  Hz, 1H).

#### Example 28

##### 6-(6-hydroxy-2-benzo[ $\beta$ ]thienyl)-4,5-dimethylbenzo-2,1,3-thiadiazole (24).

The cross-coupling of 61 mg (0.25 mmol) 6-bromo-4,5-dimethylbenzo-2,1,3-thiadiazole with 123 mg (0.38 mmol) of the product from 1(a) and the subsequent deprotection was accomplished by the procedure set forth in example 23. The crude product was purified on HPLC (silica, n-heptane + 0.5% acetic acid to ethyl acetate + 0.5% acetic acid as gradient eluent) producing 3.6 mg (0.012 mmol, 4.6%) of 6-(6-hydroxybenzo[ $\beta$ ]thien-2-yl)-4,5-dimethylbenzo-2,1,3-thiadiazole.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 7.92 (s 1H), 7.74 (d,  $J = 8.5$ , 1H), 7.38 (d,  $J = 2.2$  Hz, 1H), 7.37 (s, 1H), 7.01 (dd,  $J = 8.5, 2.2$  Hz, 1H), 2.76 (s, 3H), 2.50 (s, 3H).

#### Example 29

##### 2-(4-methyl-3-thienyl)-6-hydroxybenzo[ $\beta$ ]thiophene (25).

The cross-coupling of 44 mg (0.25 mmol) 3-bromo-4-methylthiophene with 123 mg (0.38 mmol) of the product from 1(a) and the subsequent deprotection was accomplished by the procedure set forth in example 23. The crude product was purified on HPLC (silica, n-heptane+ 0.5% acetic acid to ethyl acetate + 0.5% acetic acid as gradient eluent) producing 22 mg (0.09 mmol, 36%) 2-(4-methyl-3-thienyl)-6-hydroxybenzo[ $\beta$ ]thiophene.  $^1\text{H}$  NMR ( $\text{CD}_3\text{COCD}_3$ ) 8.57 (s

1H), 7.66 (d, J = 8.4, 1H), 7.53 (d, J = 3.2 Hz, 1H), 7.35 (s, 1H), 7.32 (m, 1H), 7.23 (m, 1H), 6.94 (dd, J = 8.4, 2.2 Hz), 2.43 (d, J = 0.74 Hz, 3H).

#### Example 30

2-(3,4,5-trimethyl-2-thienyl)-6-hydroxybenzo[ $\beta$ ]thiophene (26).

The cross-coupling of 252 mg (01.0 mmol) 2-iodo-3,4,5-trimethylthiophene with 491 mg (1.5 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude 2-(3,4,5-trimethyl-2-thienyl)-6-methoxybenzo[ $\beta$ ]thiophene was deprotected by the procedure set forth in example 1 (c) and then purified on a chromatotron (silica, 9:1, petroleum ether/ ethyl acetate) producing 180 mg (0.625 mmol, 63%) of 2-(3,4,5-trimethyl-2-thienyl)-6-hydroxybenzo[ $\beta$ ]thiophene. <sup>1</sup>H NMR (CD<sub>3</sub>COCD<sub>3</sub>) 8.55 (s, 1H), 7.67 (d, J = 8.7 Hz, 1H), 7.32 (d, J = 2.2 Hz, 1H), 7.06 (d, J = 0.7 Hz, 1H), 6.95 (dd, J = 8.7, 2.2 Hz, 1H), 2.34 (s, 3H), 2.30 (s, 3H), 1.96 (s, 3H).

#### Example 31

2-(5-(1,3-dimethyluracilyl))-6-hydroxybenzo[ $\beta$ ]thiophene (27).

(a) The cross-coupling of 266 mg (1.0 mmol) 5-iodo-1,3-dimethyluracil with 491 mg (1.5 mmol) of the product from 1(a) was accomplished by the procedure set forth in example 1(b). The crude product was purified on a chromatotron (silica, 40:1, dichloromethane/ ethyl acetate) producing 211 mg (0.625 mmol, 63%) of 2-(5-(1,3-dimethyluracilyl))-6-methoxybenzo[ $\beta$ ]thiophene.

(b) The deprotection of 30 mg (0.10 mmol) of 2-(5-(1,3-dimethyluracilyl))-6-methoxybenzo[ $\beta$ ]thiophene (example (27a)) was accomplished by the procedure set forth in example 1(c). The crude product was purified on a chromatotron (silica, 9:1, petroleum ether/ ethyl acetate) producing 1.2 mg (0.004 mmol, 4.2%) of

2-(5-(1,3-dimethyluracilyl))-6-hydroxybenzo[ $\beta$ ] thiophene  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.74 (s, 1H), 7.61 (d,  $J = 8.7$  Hz, 1H), 7.54 (s, 1H), 7.10-7.30 (m, 1H), 7.13 (dd,  $J = 8.7$ , 2.3 Hz, 1H), 3.87 (s, 3H), 3.51 (s, 3H).

### Example 32

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][phenyl]methanone (28).**

(a) To 200 mg, (0.74 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ] thiophene (Hauser *et al*, WO 96/30361) and 110 mg (0.78 mmol) benzoyl chloride in dichloro methane (5 ml) was added 740 mg (5.6 mmol) aluminium chloride. The reaction mixture was stirred for 5 hours at room temperature. The reaction was quenched by the addition of ethyl acetate and 1 M hydrochloric acid. The organic layer was separated and the aqueous phase was extracted with ethyl acetate. The combined organic phases were dried over magnesium sulphate, filtered and concentrated. The crude product was purified on a chromatotron (silica, 95:5, petroleum ether/ethyl acetate) producing 131 mg (0.35 mmol, 47%) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl]phenylmethanone as yellow crystals.  $^1\text{H}$  NMR ( $\text{CDCl}_3$ ) 7.72-7.80 (m, 2H) 7.59 (d,  $J = 8.9$  Hz, 1H), 7.36-7.43 (m, 1H), 7.21-7.34 (m, 5H), 6.97 (dd,  $J = 8.9$ , 2.5 Hz, 2H) 6.72 (m, 1H), 3.88 (s, 3H), 3.72 (s, 3H).

(b) 70 mg, (0.19 mmol) [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl] phenylmethanone (example 28a) was dissolved in dichloromethane (5 ml), put under nitrogen atmosphere and cooled to  $-5^\circ\text{C}$ . To the stirred solution was added 0.56 ml (0.56 mmol) 1M  $\text{BBr}_3$  dropwise. The reaction mixture was stirred for 1 hour at  $5^\circ\text{C}$ , poured into ice water and extracted with ethyl acetate. The organic phase was dried over magnesium sulphate, filtered and concentrated. The crude product was purified on a chromatotron (silica, 75:25 to 50:50, petroleum ether/ ethyl acetate as gradient eluent) producing 46 mg (0.13 mmol, 71%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl]phenylmethanone as yellow crystals. MP  $214-217^\circ\text{C}$ ,

<sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 8.74 (s, 1H), 8.64 (s, 1H), 7.70-7.77 (m, 2H), 7.20-7.54 (m, 7H), 6.96 (dd, J = 8.7, 2.4 Hz, 1H), 6.68-6.76 (m, 2H).

### Example 33

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[β] thien-3-yl][2-naphthyl]methanone (29).**

(a) The acylation of 150 mg, (0.55 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[β] thiophene (Hauser *et al*, WO 96/30361) with 111 mg (0.58 mmol) 2-naphthoyl chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 95:5, petroleum ether/ethyl acetate) producing 105 mg (0.25 mmol, 45%) of [2-(4-methoxyphenyl)-6-methoxybenzo[β] thien-3-yl][2-naphthyl]methanone as yellow crystals. <sup>1</sup>H nmr (CDCl<sub>3</sub>) 8.21 (s, 1H), 7.95 (dd, J = 8.7, 1.7 Hz, 1H), 7.71 (m, 3H), 7.31-7.61 (m, 6H), 6.96 (dd, J = 8.9, 2.5 Hz, 1H), 6.65 (m, 2H), 3.88 (s, 3H), 3.63 (s, 3H).

(b) The deprotection of 70 mg (0.17 mmol) of [2-(4-methoxyphenyl)-6-methoxybenzo[β] thien-3-yl][2-naphthyl]methanone (example 29(a)) was accomplished by the procedure set forth in example 28 (b). The crude product was purified on a chromatotron (silica, 75:25 to 50:50, petroleum ether/ ethyl acetate as gradient eluent) producing 47 mg (0.12 mmol, 72%) [2-(4-hydroxyphenyl)-6-hydroxybenzo[β] thien-3-yl][2-naphthyl]methanone as yellow crystals. MP 229-232°C. <sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 8.73 (s, 1H), 8.52 (s, 1H), 8.24 (s, 1H), 7.83-7.98 (m, 4H), 7.41-7.63 (m, 4H), 7.22-7.33 (m, 2H), 6.96 (dd, J = 8.8, 2.2 Hz, 1H), 6.65 (m, 2H).

### Example 34

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[β] thien-3-yl][4-tert-butylphenyl] methanone (30).**

(a) The acylation of 150 mg, (0.55 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ]thiophene (Hauser *et al*, WO 96/30361) with 115 mg (0.58 mmol) 4-tert-butylbenzoyl chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 95:5, petroleum ether/ethyl acetate) producing 125 mg (0.29 mmol, 52%) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-tert-butylphenyl]methanone as yellow crystals.  $^1\text{H}$  nmr ( $\text{CDCl}_3$ ) 7.64-7.73 (m, 2H), 7.55 (d,  $J = 8.9$  Hz, 1H), 7.22-7.34 (m, 5H), 6.95 (dd,  $J = 8.9, 2.5$  Hz, 1H), 6.72 (m, 2H), 3.87 (s, 3H), 3.71 (s, 3H), 1.22 (s, 9H).

(b) The deprotection of 70 mg (0.17 mmol) 2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-tert-butylphenyl]methanone (example (30a)) was accomplished by the procedure set forth in example 28 (b). The crude product was purified on a chromatotron (silica, gradient 75:25 to 50:50, petroleum ether/ ethyl acetate) producing 30 mg (0.07 mmol, 46%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-tert-butylphenyl]methanone as yellow crystals. MP 197-200°C,  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.69 (s, 1H), 8.60 (s, 1H), 7.63-7.70 (m, 2H), 7.35-7.46 (m, 4H), 7.21-7.28 (m, 2H), 6.94 (d,  $J = 8.8, 2.2$  Hz, 1H), 6.72 (m, 2H), 1.28 (s, 9H).

### Example 35

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-methoxyphenyl]methanone (31).**

(a) The acylation of 150 mg, (0.55 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ]thiophene (Hauser *et al*, WO 96/30361) with 99 mg (0.58 mmol) 4-methoxybenzoyl chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 95:5, petroleum ether/ethyl acetate) producing 112 mg (0.27 mmol, 50%) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-methoxyphenyl]methanone as yellow crystals.

(b) The deprotection of 70 mg (0.17 mmol) 2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-methoxyphenyl]methanone(example (31a)) was accomplished by the procedure set forth in example 28 (b). The crude product was purified on a chromatotron (silica, 50:50, petroleum ether/ ethyl acetate) producing 40 mg (0.07 mmol, 63%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-methoxyphenyl]methanone as yellow crystals.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.71 (s, 2H broad), 7.73 (m, 2H), 7.38-7.42 (m, 2H), 7.28(m, 2H), 6.94 (dd,  $J = 8.4, 2.4$  Hz, 1H), 6.86 (m, 2H), 6.75 (m, 2H), 3.79 (s, 3H).

#### Example 36

[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-carboxyphenyl]methanone (32).

(a) The acylation of 506 mg, (1.87 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ] thiophene (Hauser *et al*, WO 96/30361) with 390 mg (1.97 mmol) terephthalic acid monomethyl ester chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 8:2 petroleum ether/ethyl acetate) producing 442 mg (1.02 mmol, 55%) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-methoxycarbonylphenyl]methanone.

(b) The deprotection of 406 mg (0.94 mmol) [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-methoxycarbonylphenyl]methanone.

(example (32a)) was accomplished by the procedure set forth in example 1 (c). The crude product was purified by recrystallisation (acetic acid/ dichloromethane/ methanol) producing 270 mg (0.69 mmol, 73%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-carboxyphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.76 (s, 1H broad), 8.63 (s, 1H broad), 7.92-7.98 (m, 2H), 7.76-7.83 (m, 2H), 7.63 (d,  $J = 8.8$  Hz, 1H), 7.41 (d,  $J = 2.5$  Hz, 1H), 7.21 (m, 2H), 6.99 (dd,  $J = 8.8, 2.5$  Hz, 1H), 6.69 (m, 2H).

## Example 37

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-methoxycarbonylphenyl]methanone (33).**

100 mg (0.25 mmol) [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-carboxyphenyl]methanone (example 32(b)) were dissolved in methanol and five drops of thionyl chloride were added. The reaction mixture was stirred at room temperature for 24 hours, quenched with water, extracted with ethyl acetate and dried over magnesium sulphate. The crude product was purified on a chromatotron (silica, 9:1 petroleum ether/ethyl acetate) producing 42 mg (0.1 mmol, 42%) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-methoxycarbonylphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{OD}$ ) 8.76 (s, 1H broad), 7.82-7.88 (m, 2H), 7.66-7.72 (m, 2H), 7.61 (d,  $J = 8.9$  Hz, 1H), 7.28 (d,  $J = 2.4$  Hz, 1H), 7.08-7.14 (m, 2H), 6.90 (dd,  $J = 8.9, 2.4$  Hz, 1H), 6.53-6.60 (m, 2H), 3.85 (s, 3H).

## Example 38

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-ethoxycarbonylphenyl]methanone (34).**

50 mg (0.12 mmol) [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-carboxyphenyl]methanone (example 32(b)) were dissolved in ethanol and five drops of thionyl chloride were added. The reaction mixture was stirred at room temperature for 24 hours, quenched with water, extracted with ethyl acetate and dried over magnesium sulphate. The crude product was purified on a chromatotron (silica, 9:1 petroleum ether/ethyl acetate) producing 39 mg (0.1 mmol, 74%) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-ethoxycarbonylphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{OD}$ ) 8.72 (s, 2H broad), 7.87-7.94 (m, 2H), 7.76-7.82 (m, 2H), 7.62 (d,  $J = 8.8$  Hz, 1H), 7.42 (d,  $J = 2.2$  Hz, 1H), 7.17-7.24 (m, 2H), 6.99 (dd,  $J = 8.8, 2.2$

Hz. 1H), 6.66-6.72 (m, 2H), 4.31 (q, 2H), 1.32 (t, 3H).

#### Example 39

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-cyanophenyl]methanone (35).**

(a) The acylation of 300 mg, (1.11 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ] thiophene (Hauser *et al*, WO 96/30361) with 193 mg (1.17 mmol) 4-cyanobenzoyl chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 8:2 petroleum ether/ethyl acetate) producing 206 mg (0.52 mmol, 46%) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-cyanophenyl]methanone.

(b) The deprotection of 30 mg (0.075 mmol) [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-cyanophenyl]methanone (example (35a)) was accomplished by the procedure set forth in example 1 (c). The crude product was purified on a chromatotron (silica, 5:5 petroleum ether/ethyl acetate) producing 24 mg (0.06 mmol, 86%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-cyanophenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.77 (s, 1H broad), 8.73 (s, 1H broad), 7.78-7.85 (m, 2H), 7.65-7.73 (m, 3H), 7.43 (d,  $J = 2.2$  Hz, 1H), 7.16 (m 2H), 7.02, (dd,  $J = 8.8, 2.2$  Hz, 1H), 6.69 (m, 2H).

#### Example 40

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-(1H-tetrazol-5-yl)phenyl]methanone (36).**

30 mg (0.08 mmol) [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-cyanophenyl]methanone (example 35(b)) was dissolved in 1 ml of *N,N*-dimethylformamide and kept under nitrogen. To the reaction mixture was added 49

mg (0.08 mmol) sodium azide and 40 mg (0.08 mmol) ammonium chloride, then it was heated to reflux temperature for 2 hours. The *N,N*-dimethylformamide was removed in a speed-vac. The compound was deprotected by the procedure set forth in example 1 (c). The crude product was purified on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) producing 24 mg (0.06) mmol, 72%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-(1H-tetrazol-5-yl) phenyl]methanone. <sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 8.80 (s, 1H), 8.65 (s, 1H), 8.00-8.12 (m, 2H), 7.86-7.92 (m, 2H), 7.62 (d, J = 8.8 Hz, 1H), 7.42 (d, J = 2.2 Hz, 1H), 7.18-7.28, (m, 2H), 7.00 (dd, J = 8.8, 2.2 Hz, 1H), 6.65-6.75 (m, 2H).

#### Example 41

#### **5-oxo-5-[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl]pentanoic acid methyl ester (37).**

(a) The acylation of 200 mg, (0.74 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ] thiophene (Hauser *et al*, WO 96/30361) with 139 mg (0.78 mmol) methyl adipoyl chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 9:1 petroleum ether/ethyl acetate) producing 91 mg (0.22 mmol, 30%) of 5-oxo-5-[2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl]pentanoic acid methyl ester.

(b) The deprotection of 80 mg (0.19 mmol) 5-oxo-5-[2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl]pentanoic acid methyl ester (example (37a)) was accomplished by the procedure set forth in example 1 (c). The crude product was purified on a chromatotron (silica, 98:2 chloroform/methanol + acetic acid) producing 38 mg (0.10 mmol, 52%) of 5-oxo-5-[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl]pentanoic acid methyl ester. <sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 8.86 (s, 1H broad), 8.67 (s, 1H broad), 7.82 (d, J = 8.8 Hz, 1H), 7.28-7.40 (m, 3H), 6.95-7.05 (m 3H), 3.56 (s, 3H), 2.37-2.46 (m, 2H), 2.11-2.20 (m, 2H), 1.36-1.60 (m, 4H).

## Example 42

**5-oxo-5-[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl]pentanoic acid (38).**

25 mg (0.06 mmol) of 5-oxo-5-[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl]pentanoic acid methyl ester (example 37(b)) was dissolved in five ml of methanol and 0.5 ml of 1 M sodium hydroxide. The reaction mixture was stirred for one hour, neutralized, extracted with ethyl acetate and dried over magnesium sulphate. This produced 11 mg (0.03 mmol, 49%) of 5-oxo-5-[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl]pentanoic acid.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 7.82 (d,  $J = 8.8$  Hz, 1H), 7.28-7.40 (m, 3H), 6.90-7.05 (m 3H).

## Example 43

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-propylphenyl]methanone (39).**

(a) The acylation of 200 mg, (0.74 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ] thiophene (Hauser *et al*, WO 96/30361) with 142 mg (1.17 mmol) 4-propylbenzoyl chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 9:1 petroleum ether/ethyl acetate) producing 128 mg (0.52 mmol, 42%) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-isopropylphenyl]methanone.

(b) The deprotection of 100 mg (0.24 mmol) [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-isopropylphenyl]methanone.

(example (39a)) was accomplished by the procedure set forth in example 1 (c). The crude product was purified on a chromatotron (silica, 5:5 petroleum ether/ethyl acetate) producing 28 mg (0.07 mmol, 30%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-propylphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.71 (s, 1H), 8.62 (s, 1H), 7.62-7.70 (m, 2H), 7.45 (d,  $J = 8.8$  Hz, 1H), 7.39 (d,  $J = 2.2$  Hz, 1H), 7.21-7.28

(m 2H), 7.14-7.20 (m, 2H), 6.94, (dd,  $J = 8.8, 2.2$  Hz, 1H), 6.68-6.75 (m, 2H), 2.55 (t, 2H), 1.58 (m, 2H), 0.88 (t, 3H).

#### Example 44

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-iodophenyl]methanone (40).**

a) The acylation of 200 mg, (0.74 mmol) 6-methoxy-2-(4-methoxyphenyl)benzo[ $\beta$ ] thiophene (Hauser *et al*, WO 96/30361) with 207 mg (0.77 mmol) 4-iodobenzoyl chloride was accomplished by the procedure set forth in example 28(a). The crude product was purified on a chromatotron (silica, 9:1 petroleum ether/ethyl acetate) producing 258 mg (0.52 mmol, 70%) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-iodophenyl]methanone.

(b) The deprotection of 100 mg (0.20 mmol) [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-iodophenyl]methanone.

(example (40)) was accomplished by the procedure set forth in example 1 (c). The crude product was purified on a chromatotron (silica, 5:5 petroleum ether/ethyl acetate) producing 43 mg (0.09 mmol, 45%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-iodophenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.71 (s, 2H, broad), 8.62 (s, 1H), 7.69-7.78 (m, 2H), 7.54 (d,  $J = 8.8$  Hz, 1H), 7.45-7.50 (m, 2H), 7.40 (d,  $J = 2.2$  Hz, 1H), 7.17-7.24 (m 2H), 6.96, (dd,  $J = 8.8, 2.2$  Hz, 1H), 6.68-6.75 (m, 2H).

#### Example 45

**2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-acetylphenyl]methanone (41).**

(a) A mixture of 246 mg (0.75 mmol) of hexamethylditin, 250 mg (0.50 mmol) of

[2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-iodophenyl] methanone. (example (39a)), 6 mg (0.005 mmol) ) tetrakis triphenylphosphinepalladium (0) and 20 ml toluene was heated under reflux in a nitrogen atmosphere for 20 h. The reaction mixture was concentrated, dissolved in diethylether, washed with water twice, dried over magnesium sulphate, filtered and concentrated. This yielded 241 mg (0.45 mmol, 90%) of the desired [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-trimethylstannylphenyl]methanone.

(b) 100 mg (0.19 mmol) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-trimethylstannylphenyl]methanone (example 41(a)) and 15 mg (0.19 mmol) of acetyl chloride was dissolved in 5 ml of toluene. To the reaction mixture was added 4.6 mg (0.0044 mmol) of tris(dibenzylideneacetone)palladium(0)\*chloroform. The reaction mixture was then heated under a nitrogen atmosphere at 70°C 20 hours, filtered, extracted with ethyl acetate, washed with saturated sodium bicarbonate and dried over magnesium sulphate. The deprotection of the crude [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-acetylphenyl]methanone was accomplished by the procedure set forth in example 1 (c). The product was purified on a chromatotron (silica, 5:5 petroleum ether/ethyl acetate) producing 61 mg (0.16 mmol, 82%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-acetylphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 7.85-7.92 (m, 2H), 7.76-7.83 (m, 2H), 7.59 (d, J = 8.8 Hz, 1H), 7.41 (d, J = 2.2 Hz, 1H), 7.17-7.24 (m 2H), 6.98, (dd, J = 8.8, 2.2 Hz, 1H), 6.66-6.73 (m, 2H), 2.54 (s, 3H).

#### Example 46

**2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-propionylphenyl]methanone (42).**

200 mg (0.38 mmol) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-trimethylstannylphenyl]methanone (example 41(a)) and 34 mg (0.38 mmol) of propionyl chloride was dissolved in 10 ml of toluene. To the reaction mixture was

added 9.2 mg (0.0088 mmol) of tris(dibenzylideneacetone)palladium(0)\*chloroform. The reaction mixture was then heated under a nitrogen atmosphere at 70°C for 20 hours, filtered, extracted with ethyl acetate, washed with saturated sodium bicarbonate and dried over magnesium sulphate. The deprotection of the crude [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-propionylphenyl]methanone was accomplished by the procedure set forth in example 1 (c). The crude product was purified on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) producing 9 mg (0.02 mmol, 6%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-propionylphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.72 (s, 1H), 8.61 (s, 1H), 7.85-7.92 (m, 2H), 7.76-7.83 (m, 2H), 7.59 (d, J = 8.8 Hz, 1H), 7.41 (d, J = 2.2 Hz, 1H), 7.17-7.24 (m 2H), 6.98, (dd, J = 8.8, 2.2 Hz, 1H), 6.66-6.73 (m, 2H), 2.99 (q, 2H), 1.08 (t, 3H).

#### Example 47

#### 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-butyrylphenyl]methanone (43).

100 mg (0.19 mmol) of [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-trimethylstannylphenyl]methanone (example 41(a)) and 22 mg (0.20 mmol) of butyryl chloride was dissolved in 5 ml of toluene. To the reaction mixture was added 4.6 mg (0.0044 mmol) of tris(dibenzylideneacetone)palladium(0)\*chloroform. The reaction mixture was then heated under a nitrogen atmosphere at 70°C for 20 hours, filtered, extracted with ethyl acetate, washed with saturated sodium bicarbonate and dried over magnesium sulphate. The crude product was purified on a chromatotron (silica, 9:1 petroleum ether/ethyl acetate). The deprotection of the crude [2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-butyrylphenyl]methanone was accomplished by the procedure set forth in example 1 (c). The product was purified on a chromatotron (silica, 9:1 petroleum ether/ethyl acetate) producing 17 mg (0.04 mmol, 22%) of [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-butyrylphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.72 (s, 1H), 8.61 (s, 1H), 7.85-7.92 (m, 2H), 7.76-7.83 (m, 2H),

7.60 (d,  $J = 8.8$  Hz, 1H), 7.42 (d,  $J = 2.2$  Hz, 1H), 7.17-7.24 (m 2H), 6.99, (dd,  $J = 8.8, 2.2$  Hz, 1H), 6.66-6.73 (m, 2H), 2.96 (q, 2H), 1.67 (m, 2H), 1.08 (t, 3H).

#### Example 48

**[2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-ethylthiocarbonylphenyl]-methanone (44).**

50 mg (0.12 mmol) [2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-carboxyphenyl]methanone (example 32(b)) were dissolved in ethanthiol and five drops of thionyl chloride were added. The reaction mixture was stirred at room temperature for 24 hours in a nitrogen atmosphere, quenched with water, extracted with ethyl acetate and dried over magnesium sulphate. The crude product was purified on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) producing 26 mg (0.06 mmol, 54%) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-ethylthiocarbonylphenyl]methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{OD}$ ) 8.72 (s, 1H broad), 8.60 (s, 1H), 7.89-7.98 (m, 2H), 7.75-7.84 (m, 2H), 7.61 (d,  $J = 8.8$  Hz, 1H), 7.42 (d,  $J = 2.5$  Hz, 1H), 7.17-7.24 (m, 2H), 6.99 (dd,  $J = 8.8, 2.5$  Hz, 1H), 6.66-6.72 (m, 2H), 2.89 (q, 2H), 1.32 (t, 3H).

#### Example 49

**2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-hydroxyphenyl]methanone (45)**

The deprotection of 2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ]thien-3-yl][4-methoxyphenyl]methanone (example (31a)) as described in example 31(b) produced after purification 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ]thien-3-yl][4-hydroxyphenyl]methanone as a byproduct.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.60-9.00 (s, 3H broad), 7.62-7.72 (m, 2H), 7.36-7.40 (m, 2H), 7.22-7.28 (m, 2H), 6.92 (dd,  $J = 8.6, 2.4$  Hz, 1H), 6.68-6.80 (m, 4H).

## Example 50

**2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-methylamino carbonyl-phenyl]methanone (46)**

2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-methoxycarbonylphenyl]methanone (example 32(b)) was deprotected to 2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-carboxyphenyl]methanone by dissolving in ethanol and stirring with 1M sodium hydroxide for 4 hours. The ethanol was evaporated and the aqueous phase was extracted with ethylacetate, dried over magnesium sulphate and evaporated. The following reaction was run in a parallel solution phase way. 20 mg (0.048 mmol) of 2-(4-methoxyphenyl)-6-methoxybenzo[ $\beta$ ] thien-3-yl][4-carboxyphenyl]methanone was mixed in sequential order with 30 mg (0.058 mmol) of benzotriazole-1-yl-oxy-tris--pyrrolidino-phosphonium hexafluorophosphate (PyBOP), 3.6 mg (0.024 mmol) of N-hydroxybenzotriazole\*H<sub>2</sub>O (HOBt), 2.5 ml of *N,N*-dimethylformylamide, 12.4 mg (0.096 mmol) of *N,N*-diisopropylethylamine and 2.23 mg (0.096 mmol) of methylamine hydrochloride in a nitrogen atmosphere at room-temperature for 3 days. The reaction was diluted with ethyl acetate. The organic phase was washed with 10% citric acid, dried by passing through a 3 ml extube. Varian Chem. Elut. and concentrated on a speed-vac. The deprotection of 2-(4-methoxyphenyl)--6-methoxybenzo[ $\beta$ ] thien-3-yl][4-methylaminocarbonylphenyl]methanone as described in example 1(c) produced after purification on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) 6 mg (0.015 mmol, 31%) of 2-(4--hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-methylaminophenyl]methanone. <sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 7.70-7.85 (m, 4H), 7.55 (d, J = 8.8, 1H), 7.41 (d, J = 2.2, 1H), 7.19-7.25 (m, 2H), 6.99 (d, J = 8.8, 2.2 Hz, 1H), 6.66-6.74 (m, 2H).

## Example 51

**2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-isobutylaminocarbonylphenyl]methanone (47)**

This reaction was run in a parallel solution phase way by the procedure set forth in example 46, using isobutylamine hydrochloride (5.24 mg (0.096 mmol)) instead of methylamine. The crude product was purified on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) producing 1.2 mg (0.0027 mmol, 5.6 %) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-isobutylaminophenyl]-methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 7.72-7.92 (m, 4H), 7.51 (d,  $J = 8.8$ , 1H), 7.42 (d,  $J = 2.2$  Hz, 1H), 7.18-7.26 (m, 2H), 6.97 (dd,  $J = 8.8$ , 2.2 Hz, 1H), 6.66-6.76 (m, 2H).

**Example 52**

**2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl]-[4-benzylaminocarbonylphenyl]methanone (48)**

This reaction was run in a parallel solution phase way by the procedure set forth in example 46, using benzylamine hydrochloride (7.68 mg (0.096 mmol)) instead of methylamine. The crude product was purified on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) producing 1.7 mg (0.0035 mmol, 7.4 %) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-benzylaminophenyl]-methanone.  $^1\text{H}$  nmr ( $\text{CD}_3\text{COCD}_3$ ) 8.33 (s, broad), 7.85-7.91 (m, 2H), 7.75-7.82 (m, 2H), 7.53 (d,  $J = 8.8$  Hz, 1H), 7.42 (d,  $J = 2.2$  Hz, 1H), 7.18-7.36 (m, 7H), 6.98 (dd,  $J = 8.8$ , 2.2 Hz, 1H), 6.68-6.74 (m, 2H).

**Example 53**

15 mg (0.040 mmol) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[ $\beta$ ] thien-3-yl][4-carboxyphenyl]methanone (example 32(b)) was mixed in sequential order with 40 mg (0.077 mmol) of benzotriazole-1-yl-oxy-tris-pyrrolidino-phosphonium hexafluorophosphate (PyBOP), 4.9 mg (0.032 mmol) of N-hydroxybenzotriazole\* $\text{H}_2\text{O}$  (HOBT),

3.0 ml of *N,N*-dimethylformylamide, 16.5 mg (0.128 mmol) of *N,N*-diisopropylethylamine and 0.015 g (0.096 mmol) of L-serine methylester hydrochloride in a nitrogen atmosphere at room-temperature for 3 days. The reaction was diluted with ethyl acetate. The organic phase was washed with 1M hydrochloric acid and brine. Then dried over magnesium sulphate and evaporated to dryness. Purification on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) produced 7.4 mg (0.015 mmol, 38%) of **49**. <sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 7.78-7.92 (m, 4H), 7.55 (d, J = 8.8, 1H), 7.41 (d, J = 2.2, 1H), 7.19-7.28 (m, 2H), 6.98 (dd, J = 8.8, 2.2 Hz, 1H), 6.66-6.74 (m, 2H), 4.69 (m, 1H), 3.95 (m, 2H), 3.69 (s, 3H).

#### Example 54

15 mg (0.040 mmol) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[β] thien-3-yl][4--carboxyphenyl]methanone (example 32(b)) was mixed in sequential order with 40 mg (0.077 mmol) of benzotriazole-1-yl-oxy-tris-pyrrolidino-phosphonium hexafluorophosphate (PyBOP), 4.9 mg (0.032 mmol) of *N*-hydroxybenzotriazole\*H<sub>2</sub>O (HOBT), 3.0 ml of *N,N*-dimethylformylamide, 16.5 mg (0.128 mmol) of *N,N*-diisopropylethylamine and 0.013 g (0.096 mmol) of L-alanine methylester hydrochloride in a nitrogen atmosphere at room-temperature for 3 days. The reaction was diluted with ethyl acetate. The organic phase was washed with 1M hydrochloric acid and brine. Then dried over magnesium sulphate and evaporated to dryness. Purification on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) produced 17.4 mg (0.037 mmol, 91%) of **50**. <sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 8.12 (s, 1H broad), 8.10 (s, 1H broad), 7.75-7.89 (m, 4H), 7.53 (d, J = 8.8, 1H), 7.41 (d, J = 2.2, 1H), 7.17-7.23 (m, 2H), 6.98 (dd, J = 8.8, 2.2 Hz, 1H), 6.69-6.74 (m, 2H), 4.59 (m, 1H), 3.66 (s, 3H), 1.45 (d, 3H).

#### Example 55

15 mg (0.040 mmol) of 2-(4-hydroxyphenyl)-6-hydroxybenzo[β] thien-3-yl][4--carboxyphenyl]methanone (example 32(b)) was mixed in sequential order with 40 mg

(0.077 mmol) of benzotriazole-1-yl-oxy-tris-pyrrolidino-phosphonium hexafluorophosphate (PyBOP), 4.9 mg (0.032 mmol) of N-hydroxybenzotriazole\*H<sub>2</sub>O (HOBt), 3.0 ml of *N,N*-dimethylformylamide, 16.5 mg (0.128 mmol) of *N,N*-diisopropylethylamine and 0.021 g (0.096 mmol) of L-phenylalanine methylester hydrochloride in a nitrogen atmosphere at room-temperature for 3 days. The reaction was diluted with ethyl acetate. The organic phase was washed with 1M hydrochloric acid and brine. Then dried over magnesium sulphate and evaporated to dryness. Purification on HPLC (reversed phase, C18, gradient acetonitrile/ water + 0.05 trifluoroacetic acid) produced 10.9 mg (0.020 mmol, 51%) of **51**. <sup>1</sup>H nmr (CD<sub>3</sub>COCD<sub>3</sub>) 8.01 (s, 1H broad), 7.98 (s, 1H broad), 7.75 (s, 4H), 7.53 (d, J = 8.8, 1H), 7.41 (d, J = 2.2, 1H), 7.15-7.31 (m, 7H), 6.98 (dd, J = 8.8, 2.2 Hz, 1H), 6.69-6.74 (m, 2H), 4.82 (m, 1H), 3.65 (s, 3H).

The biological character of the compounds prepared in accordance with Examples 1 to 26 and 28 to 40 inclusive and also, for comparison purposes estradiol was measured in a radioligand displacement assay. The affinity for ER $\alpha$  and ER $\beta$  was measured as an IC<sub>50</sub>, the concentration of ligand necessary to displace 50% of tritiated 17- $\beta$ -estradiol from either hER $\alpha$  (human estrogen receptor  $\alpha$ ) or hER $\beta$  (human estrogen receptor  $\beta$ ) respectively. In this assay, it was found that the IC<sub>50</sub>'s of compounds varied from 2.0 nM to 20  $\mu$ M for ER $\alpha$  and from 2.0 nM to 12  $\mu$ M for ER $\beta$ . The ER $\alpha$ /ER $\beta$  selectivity ratio varied from 0.2 to 23.

#### Experimental description of ER binding assay

Affinity for the ER (by displacement of <sup>3</sup>[H]-estradiol) was measured using the scintistrip assay<sup>1</sup>. Human estrogen receptors (hER) alpha and beta were extracted from the nuclei from SF9-cells infected with a recombinant baculovirus transfer vector containing the cloned hER genes.<sup>2</sup> The concentration of hER's in the extract was measured as specific <sup>3</sup>[H]-E2 binding with the G25-assay.<sup>3</sup>

- 1) Haggblad, J., Carlsson, B., Kivelä, P., Siitari, H., (1995) *Biotechniques* **18**, 146-151.
- 2) Barkhem, T., Carlsson, B., Simons, J., Moller, B., Berkenstam, A., Gustafsson

- J.A.G., Nilsson, S. (1991) *J. Steroid Biochem. Molec. Biol.* **38**, 667-75.
- 3) Salomonsson, M., Carlsson, B., Haggblad, J., (1994) *J. Steroid Biochem. Molec. Biol.* **50**, 313-318.

**CLAIMS**

1. A crystal comprising at least a portion of the ER $\alpha$  ligand binding domain.
2. A crystal according to claim 1 comprising at least 200 amino acids of ER $\alpha$ .
3. A crystal according to claim 1 or claim 2 comprising at least 250 amino acids of ER $\alpha$ .
4. A crystal according to claim 1, 2 or 3 comprising entire ER $\alpha$ .
5. A crystal according to any preceding claim produced using a sequence including helix H<sub>12</sub> of ER $\alpha$ .
6. A crystal according to any one of claims 1 to 5 usable in X-ray crystallography techniques.
7. A crystal according to any one of claims 1 to 6 including a ligand bound to ER $\alpha$  or a portion thereof.
8. A crystal according to claim 7 in which the ligand is estradiol, raloxifene, or any other ligand that binds with high affinity (<10 $\mu$ M) to ER $\alpha$ .
9. A crystal of ER $\alpha$  LBD according to any preceding claim belonging to the space group P2<sub>1</sub> and having the unit cell dimensions a=61.48Å, b=115.16Å, c=137.38Å.
10. A crystal of ER $\alpha$  LBD according to any preceding claim belonging to the space group P2<sub>1</sub> and having the unit cell dimensions a=104.53Å b=53.68Å c=102.71Å and  $\beta$ =116.79°.
11. A crystal of ER $\alpha$  LBD according to any one of claims 1 to 9 belonging to the

space group C2 and having the unit cell dimensions  $a=89.91\text{\AA}$   $b=75.09\text{\AA}$   $c=87.50\text{\AA}$  and  $\beta=103.01^\circ$ .

12. A crystal of ER $\alpha$  LBD according to any one of claims 1 to 9 belonging to the space group C222<sub>1</sub> and having the unit cell dimensions  $a=65.47\text{\AA}$   $b=95.99\text{\AA}$   $c=164.14\text{\AA}$ .

13. A method for designing ligands which will bind to an estrogen receptor, the method comprising determining amino acid or acids of the ligand binding domain of the estrogen receptor which interact with a binding ligand, and selecting a ligand which is likely to bind to the receptor according to the structure of the potential ligand.

14. A method according to claim 13 in which interaction with ER $\alpha$  and ER $\beta$  are separately determined whereby ER-form selective ligands can be selected.

15. A method according to claim 13 or 14, in which for ER $\alpha$  selective ligands the design of the potential ligand uses a crystal according to any one of claims 1 to 12.

16. Ligands for estrogen receptors designed using a method according to claim 13, 14 or 15.

17. Ligands designed according to a method according to claim 14 which are specific for ER $\alpha$  or ER $\beta$ .

18. Ligands binding to at least the LBD of an ER with an affinity of between 20 pmol and 200 nM.

19. Ligands binding reversibly to at least the LBD of an ER.

20. A method of inhibiting estadiol activity in an animal, the method comprising

administering to the animal a ligand according to claim 19 or claim 20.

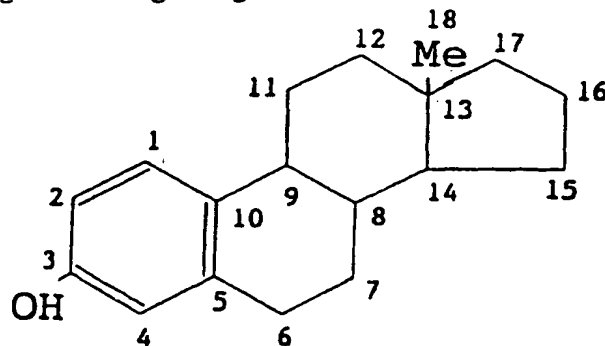
21. A method of inhibiting estradiol activity according to claim 20 comprising administering a ligand according to claim 18 or claim 19.

22. A pharmaceutical compound comprising a ligand according to any one of claims 16 to 19.

23. An estrogen agonist, an estrogen antagonist, a partial estrogen agonist, or a partial estrogen antagonist designed using a method according to claim 13, 14 or 15.

24. An ER $\alpha$  selective ligand having a structural group larger than methyl capable of fitting into the  $\beta$  cavity of the ER $\alpha$ .

25. An ER $\alpha$  selective ligand having the general formula Z



and having hydrophobic substituents at one or more of the 8 $\beta$ , 15 $\beta$  or 18 positions.

26. An ER $\beta$  selective ligand having the formula Z of claim 25 and having hydrophobic substituents at one or more of the 9 $\alpha$  or 12 $\alpha$  positions.

27. An ER $\alpha$  selective ligand according to claim 25 or ER $\beta$  selective ligand according to claim 26 in which the hydrophobic substituent is selected from methyl groups, ethyl groups, iso-propyl groups, chlorine, bromine or iodine.

28. An ER $\alpha$  or ER $\beta$  selective ligand, in which the ligand is a 2'-, 3'-, 5'- and/or 6'-

substituted 2-aryl benzothiophene.

29. An ER $\alpha$  or ER $\beta$  selective ligand according to claim 28, which is substituted at one or more of the 2',3', 5' and 6' positions.

30. An ER $\alpha$  selective ligand according to claim 28, in which the substituted 2-aryl benzothiophene fills the  $\alpha$ - and  $\beta$ -face cavities of the ER.

31. An ER $\alpha$  selective ligand, which is a 2-aryl benzothiophene with a small hydrophobic substituent at one or more of the 2',3',5' and 6' positions.

32. An ER ligand capable of filling the hydrophobic cavity of ER- $\alpha$ .

33. A ligand according to claim 32 which has a hydrophobic substituent on the ethoxyphenyl sidechain to the piperidinyll nitrogen atom of raloxifene.

34. A ligand according to claim 31 or 32 in which the ligand has a hydrophobic substituent selected from linear alkyl groups, perfluoroalkyl groups ( $-\text{CH}_3$  to  $-\text{CH}_{10}\text{H}_{21}$ ,  $-\text{CF}_3$  to  $-\text{C}_{10}\text{F}_{21}$ ), benzyl- $(\text{CH}_2\text{Ph})$ , benzyl-(methylene cyclohexyl groups).

35. An ER ligand having a structure capable of interacting with Glu-353 of ER $\alpha$  or with Glu-262 of ER $\beta$ .

36. An ER ligand having a structure capable of interacting with Arg-394 of ER $\alpha$  or with Arg-303 of ER $\beta$ .

37. An ER ligand having a structure capable of interacting with residue His-524 of ER $\alpha$  or with His-432 of ER $\beta$ .

38. An ER ligand having a structure capable of interacting with Met-421 or Leu-384 of ER $\alpha$  or with Ile-330 Met-293 of ER $\beta$ .

39. An ER $\alpha$  selective ligand having a structure capable of interacting with Met-421 and/or Leu-384 of ER $\alpha$ .
40. An ER $\beta$  selective ligand having a structure capable of interaction with Ile-330 and/or Met-293 of ER $\beta$ .
41. An ER $\beta$  selective ligand according to claim 40 in which substitutions larger than a methyl group are provided at the  $\alpha$  14,16 or 17 positions of the steroid nucleus.
42. An ER ligand having a structure capable of interacting with Leu-384 of ER $\alpha$  or Met-293 of ER $\beta$ .
43. An ER $\alpha$  selective ligand capable of interacting with Leu-384 of ER $\alpha$ .
44. An ER $\beta$  selective ligand capable of interacting with Met-293 of ER $\beta$ .
45. An ER $\beta$  selective ligand according to claim 40 further provided with substituents at the 2' or 3' positions of the 2-aryl benzothiophene nucleus.
46. An ER $\beta$  selective ligand having a substituent larger than a methyl group at the R<sub>2</sub>' position of a 6,3'-dihydroxybenzothiophene.
47. An ER $\alpha$  selective ligand having a substituent larger than a methyl group at either the R<sub>2</sub>' and/or R<sub>3</sub>' position of a 6,5'-dihydroxybenzothiophene.
48. A ligand selective for either ER $\alpha$  or ER $\beta$  in which the ligand comprises a position-6 substituent from the benzothiophene nucleus or position-3 substituent from the estradiol nucleus arranged to selectively bind to either the amino acid Ile-326 of ER $\alpha$  or Asn-236 of ER $\beta$ .
49. A ligand selective for either ER $\alpha$  or ER $\beta$  in which the ligand comprises a

position-6 substituent from the benzothiophene nucleus or position-3 substituent from the estradiol nucleus arranged to selectively bind to either the amino acid Phe-445 of ER $\alpha$  or Tyr-354 of ER $\beta$ .

50. An ER $\alpha$  selective ligand having a structure capable of simultaneously interacting with Glu-323 and Phe-445 of ER $\alpha$  in preference to Glu-262 and Tyr-354 of ER $\beta$ .

51. An ER ligand having a structure arranged to promote binding with Helix H12 of the ER structure.

52. A crystal according to any of claims 1 to 12, having a resolution determined by X-ray crystallography less than 3.5Å.

53. A machine-readable data storage medium, comprising a data storage material encoded with machine readable data which, when using a machine programmed with instructions for using said data, is capable of displaying a graphical three-dimensional representation of a crystal according to any one of claims 1 to 12 or a homologue of said crystal.

54. A method for evaluating the ability of a chemical entity to associate with an estrogen receptor, the method comprising the steps of:

- a) employing computational means to perform a fitting operation between the chemical entity and a binding site of the receptor; and
- b) analysing the results of the fitting operation to predict the association between the chemical entity and the binding site.

55. A crystallized molecule or molecular complex comprising a binding pocket defined by the structure coordinates of human ER- $\alpha$  ligand binding domain amino acid residues MET343, LEU346, THR347, LEU349, ALA350, ASP351, GLU353, LEU354, TRP383, LEU384, LEU387, MET388, LEU391, ARG394, PHE404, MET421, ILE424,

PHE425, LEU428, GLY521, HIS524, LEU525 or a homologue of said molecule or molecular complex, wherein said homologue has a root mean square deviation from the backbone atoms of said amino acids of not more than 1.5Å.

56. A homology model comprising a binding pocket defined by the structure coordinates of human ER- $\beta$  ligand binding domain amino acid residues MET343, LEU346, THR347, LEU349, ALA350, ASP351, GLU353, LEU354, TRP383, MET384, LEU387, MET388, LEU388, LEU391, ARG394, PHE404, ILE421, ILE424, PHE425, LEU428, GLY521, HIS524, LEU525.

57. A crystallized molecule or molecular complex comprising a binding pocket defined by the structure coordinates of rat ER- $\alpha$  ligand binding domain amino acid residues MET252, LEU255, THR256, LEU258, ALA259, ASP260, GLU262, LEU263, TRP292, LEU293, LEU296, MET297, LEU300, ARG303, PHE313, ILE330, ILE333, PHE334, LEU337, GLY429, HIS423, LEU433 or a homologue of said molecule or molecular complex, wherein said homologue has a root mean square deviation from the backbone atoms of said amino acids of not more than 1.5Å.

58. A homology model comprising a binding pocket defined by the structure coordinates of rat ER- $\beta$  ligand binding domain amino acid residues MET252, LEU255, THR256, LEU258, ALA259, ASP260, GLU262, LEU263, TRP292, MET293, LEU296, MET297, LEU300, ARG303, PHE313, ILE330, ILE333, PHE334, LEU337, GLY429, HIS432, LEU433.

59. A method of agonising or antagonising ER $\alpha$  or ER $\beta$ , the method comprising administering to a mammal a compound, other than raloxifene, that fits spatially into the binding pocket of ER $\beta$ .

60. A method according to claim 59 in which the compounds has at least one of the following:

- a) a group capable of functioning as a hydrogen bond donor to HIS432;

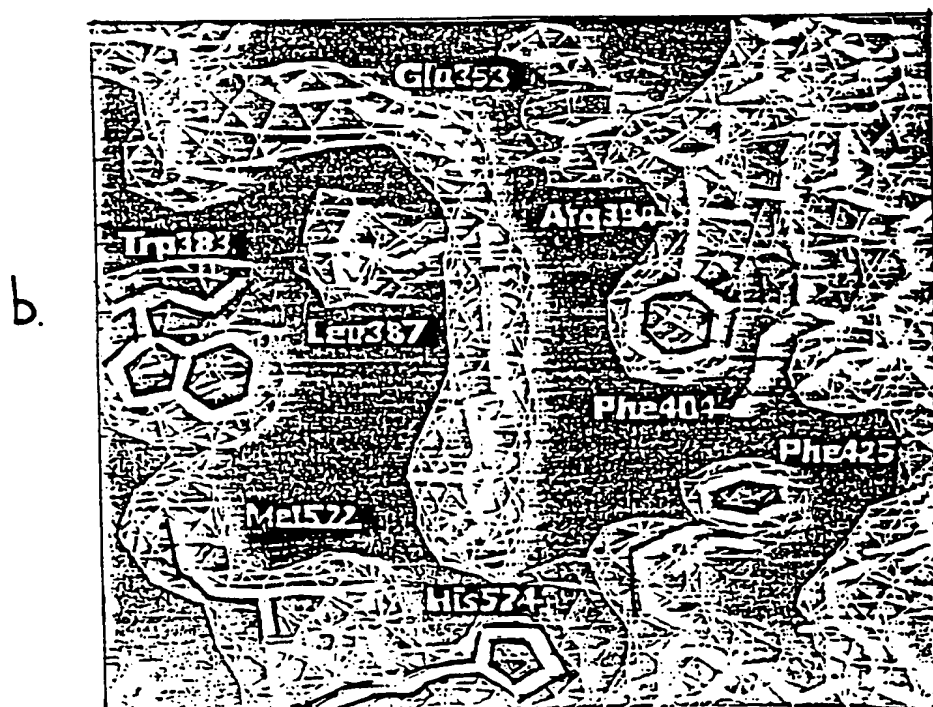
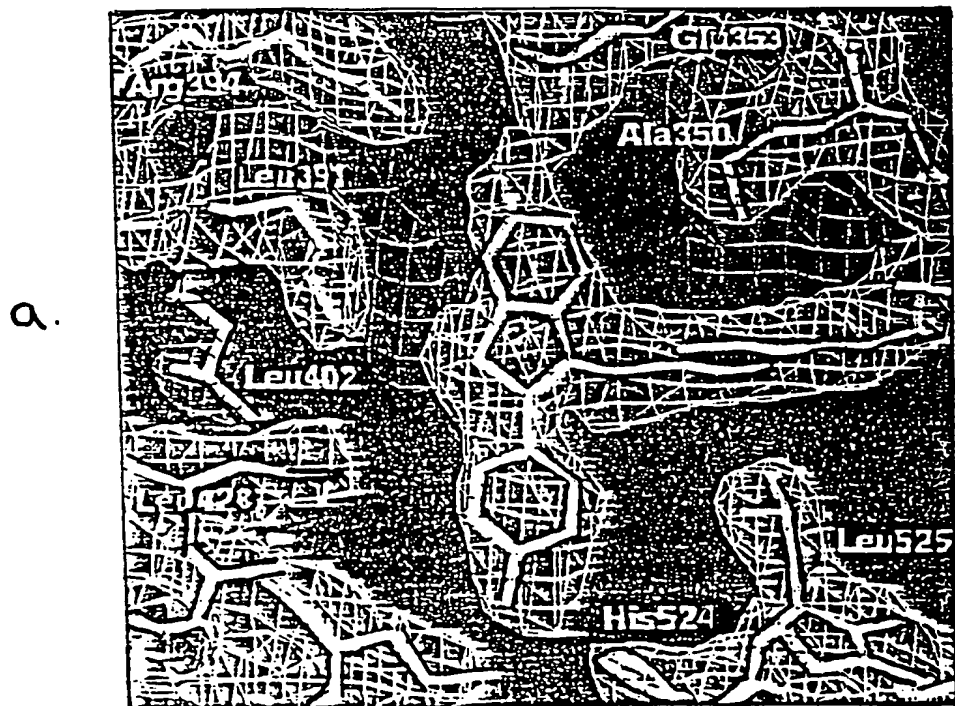
- b) A group that functions as a hydrogen bond acceptor and donor to Arg-394 and Glu-353 of ER $\alpha$  or Arg-303 and Glu-262 of ER $\beta$ ;
- c) a group capable of forming a hydrophobic contact with at least one of Met-252, Leu-255, Leu-258, Ala-259, Leu-263, Trp-292, Met-293, Leu-296, Met-297, Leu-300, Phe-313, Ile-330, Ile-333, Phe-334, Leu-337, Leu-433 of ER $\beta$ , or Met-343, Leu-346, Leu-349, Ala-350, Leu-354, Trp-383, Leu-384, Leu-387, Met-388, Leu-391, Phe-404, Met-421, Ile-424, Phe-425, Leu-428, Leu-525, of ER $\alpha$ .

61. A method of antagonising ER $\beta$  according to claim 59 or 60 in which the compound has a group that can form either a hydrogen bond or a salt bridge to ASP260.

62. A method of antagonising ER $\alpha$  according to claim 59 or 60 in which the compound has a group that can form either a hydrogen bond or a salt bridge to Asp-351.

63. An ER ligand in accordance with any one of the Examples 5 to 55.

FIGURE 1



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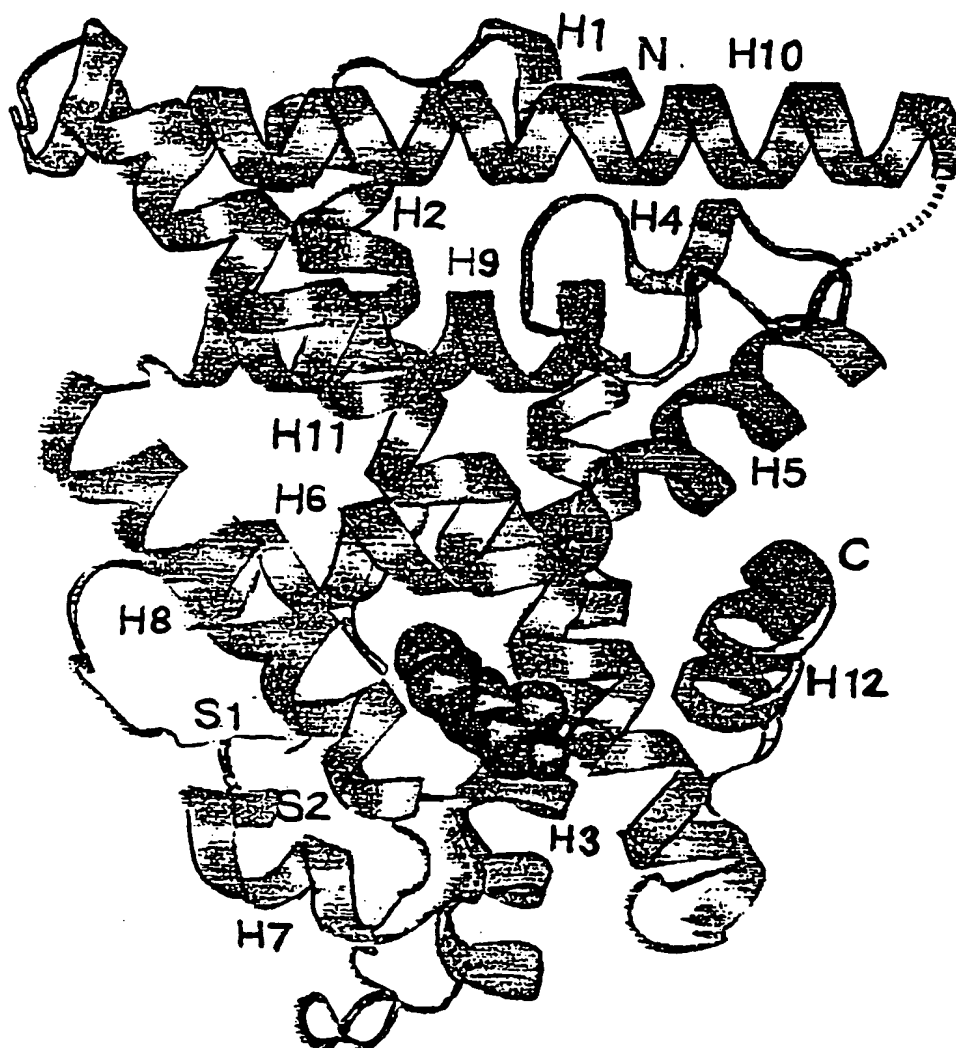


FIGURE 2a



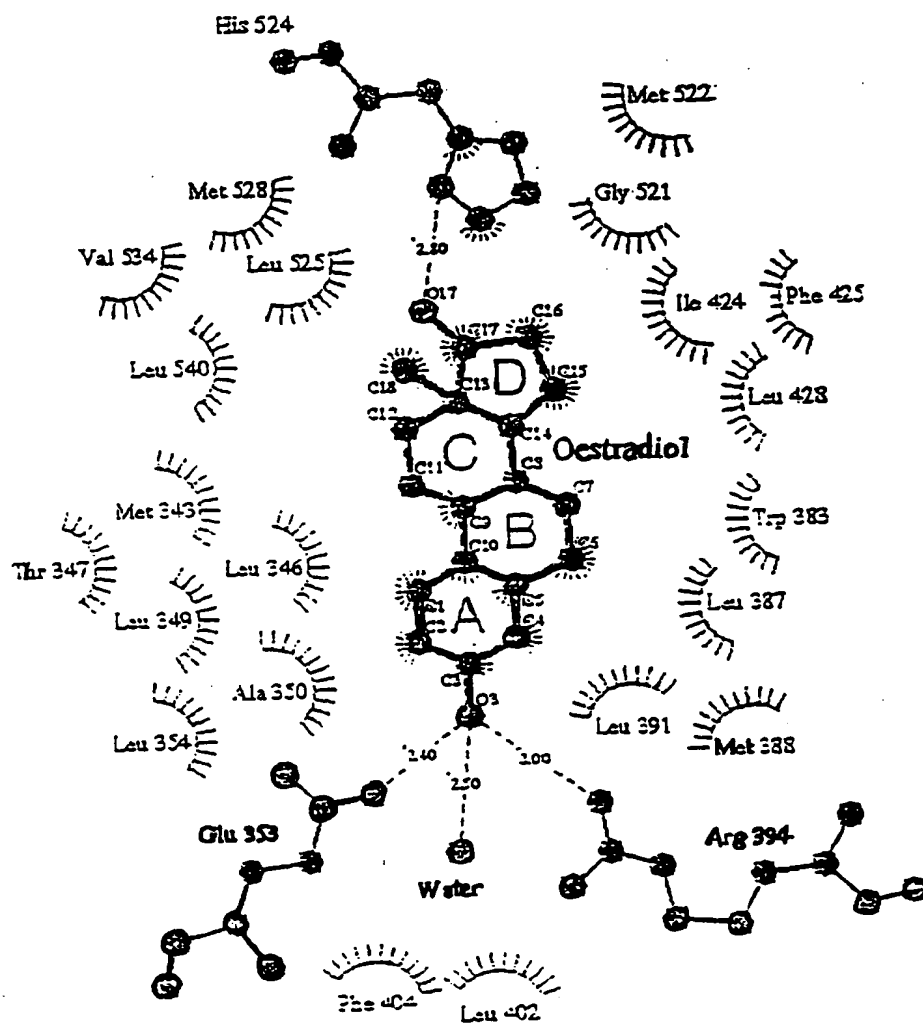
Figure 3



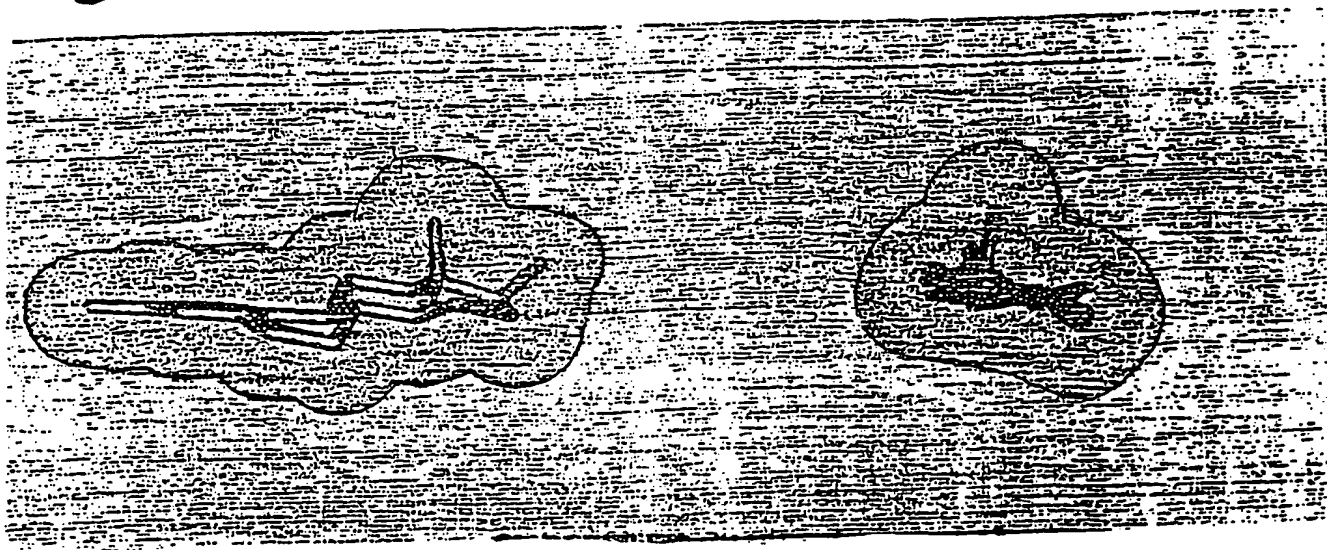
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FIGURE 3

b



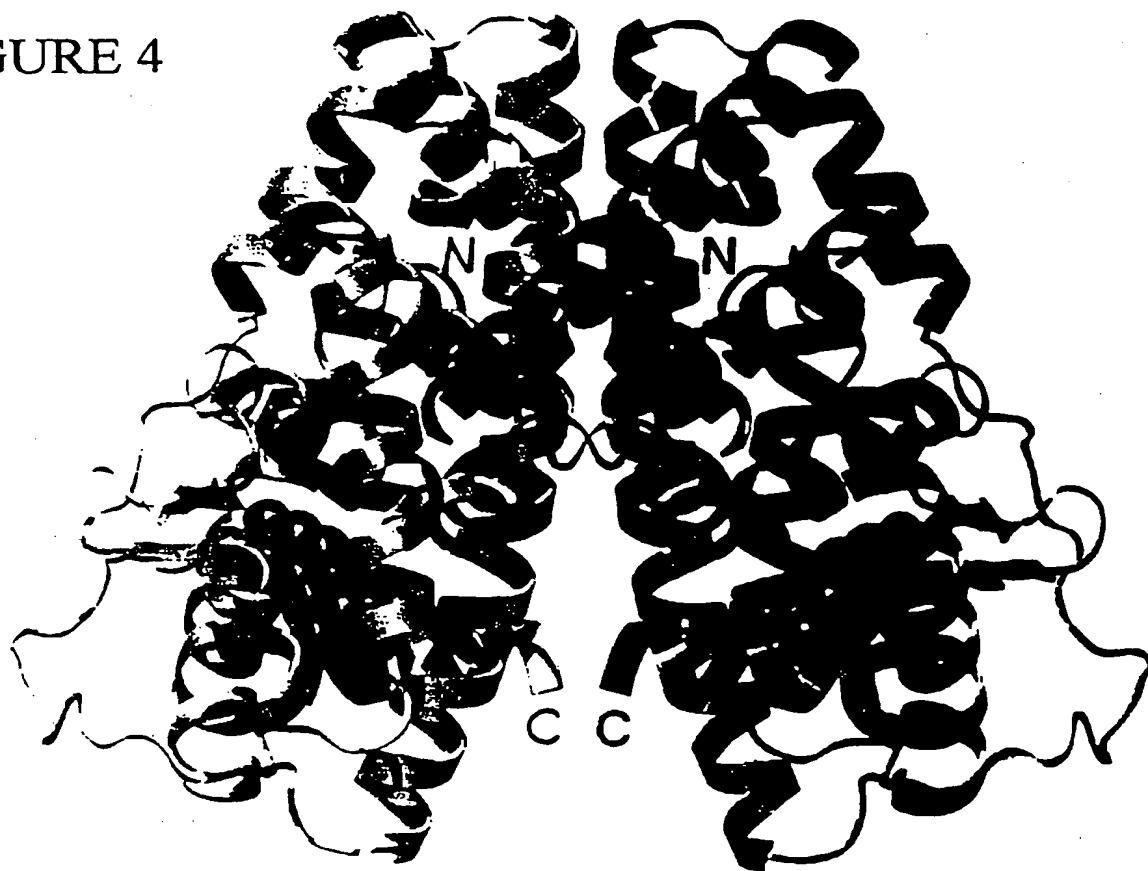
C



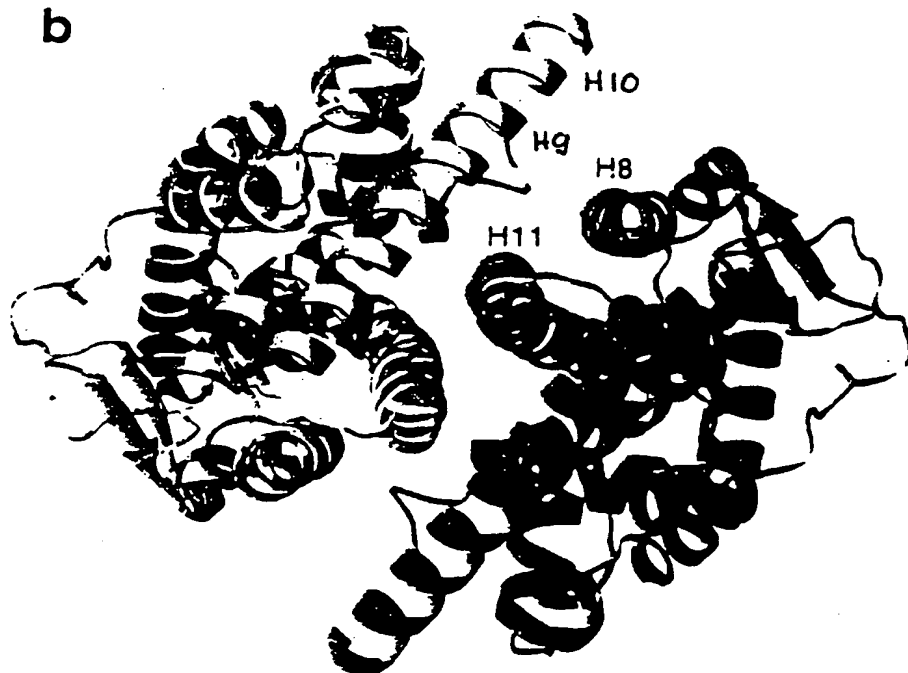
SUBSTITUTE SHEET (RULE 26)

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FIGURE 4

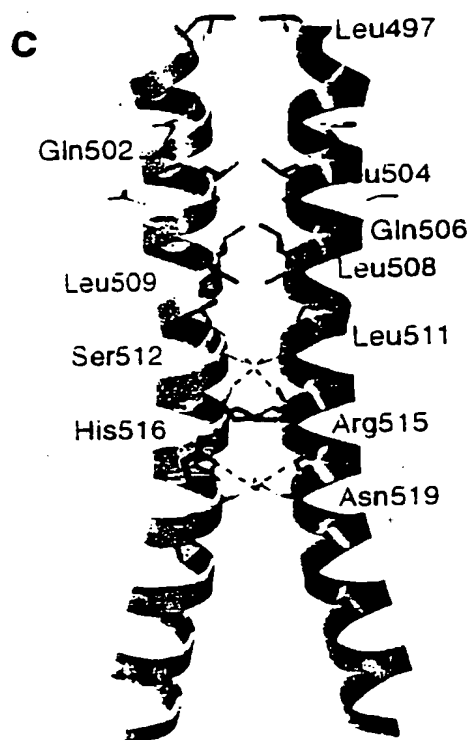


b

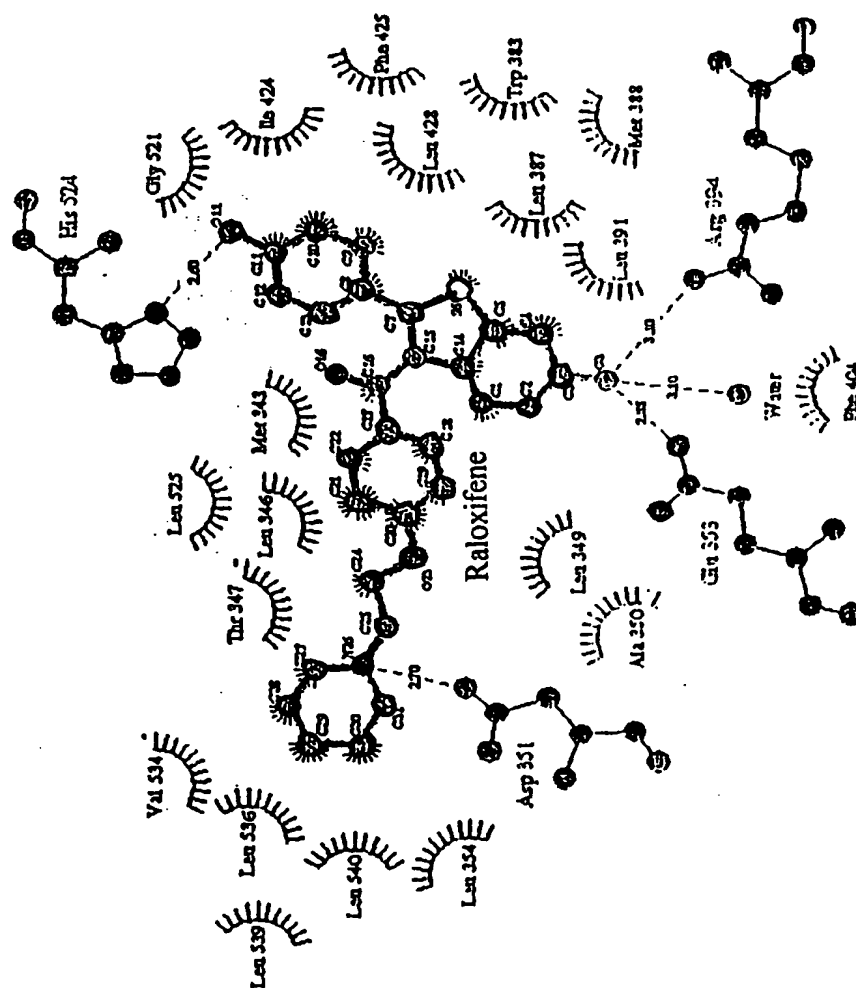


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FIGURE 4



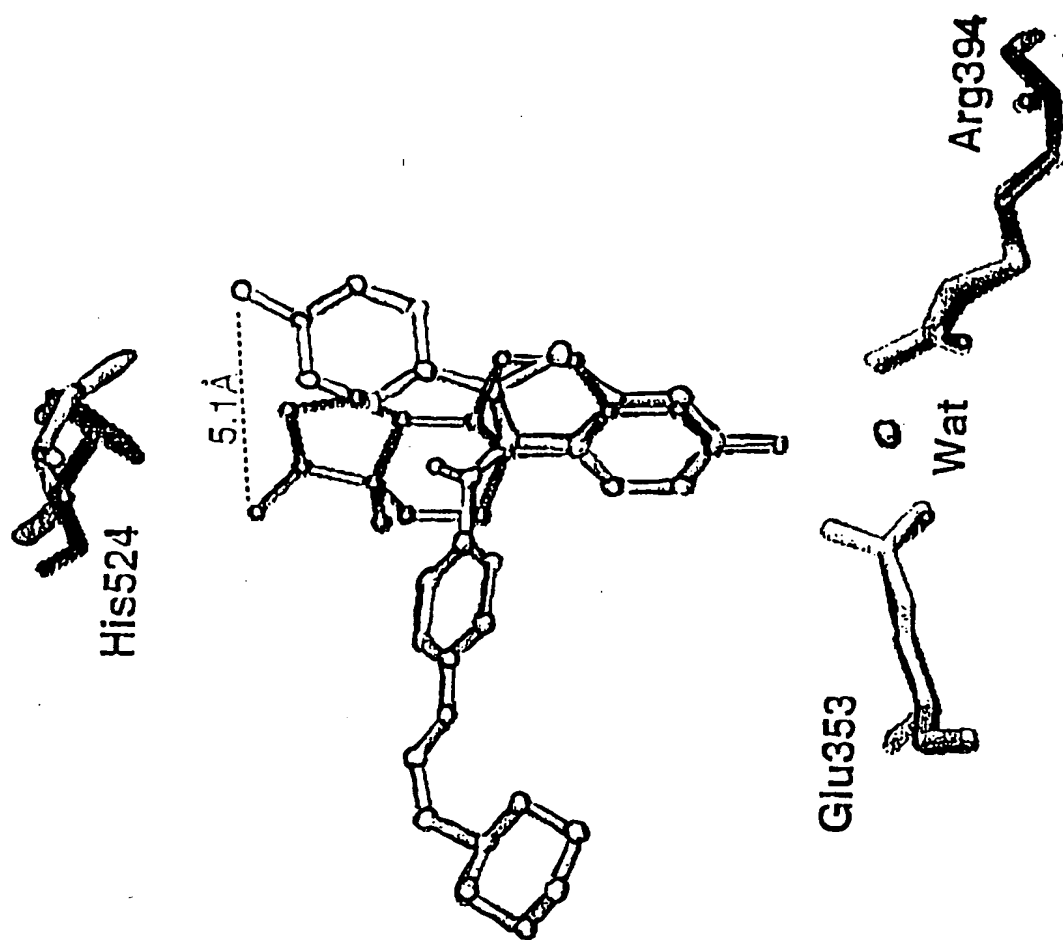
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FIGURE 5  
a.

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FIGURE 5

b.



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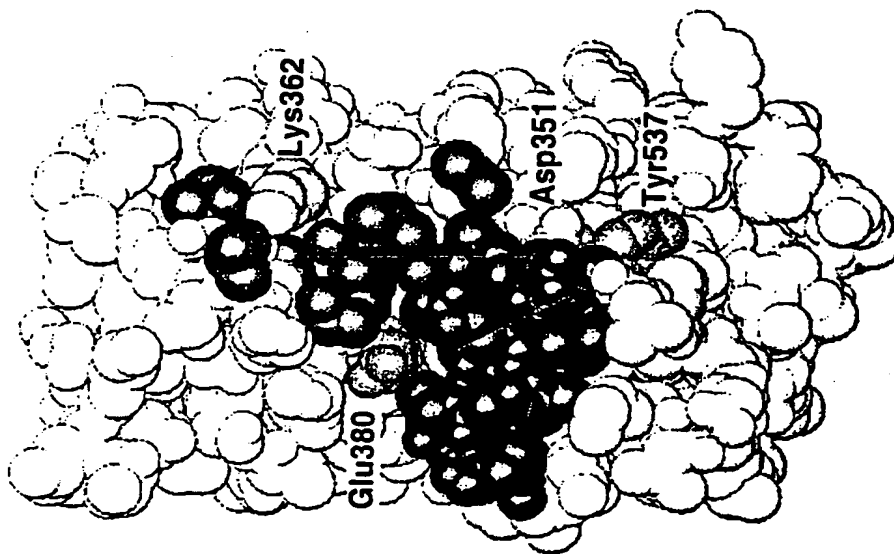
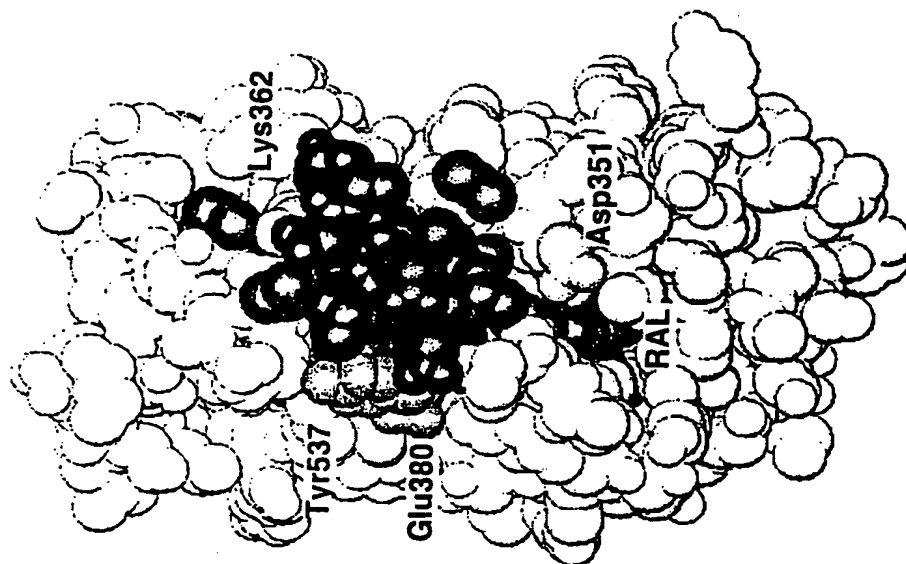
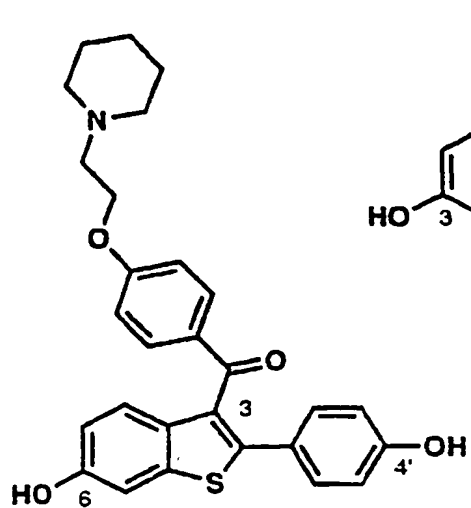


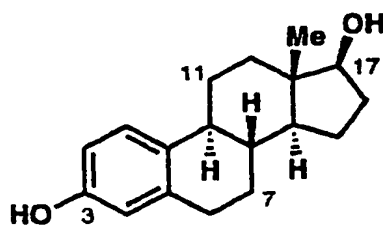
FIGURE 7

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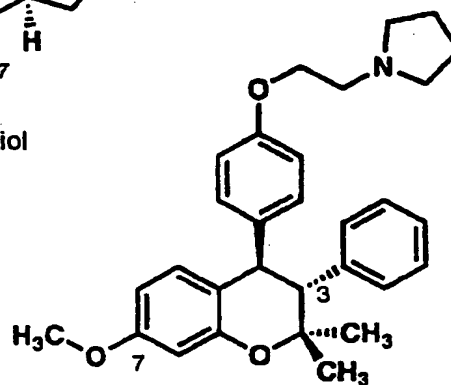
FIGURE 8



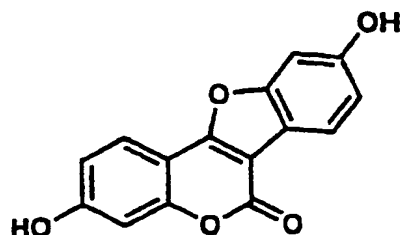
Raloxifene



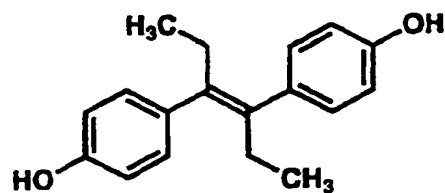
17-β-Estradiol



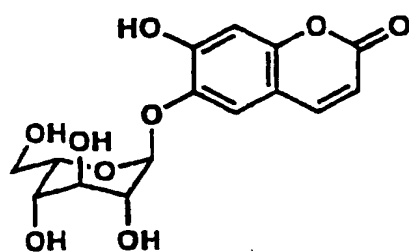
Centchroman



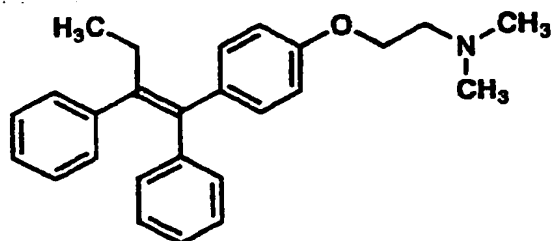
Coumestrol



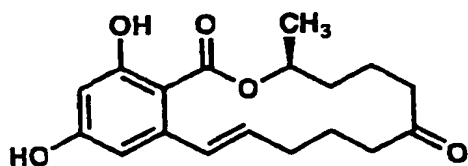
Diethylstilbestrol



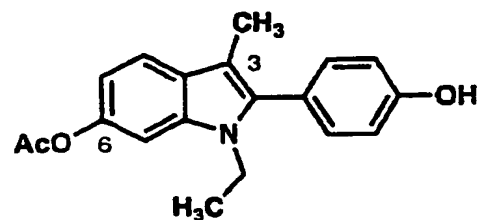
Esculin



Tamoxifen



Zearalenone

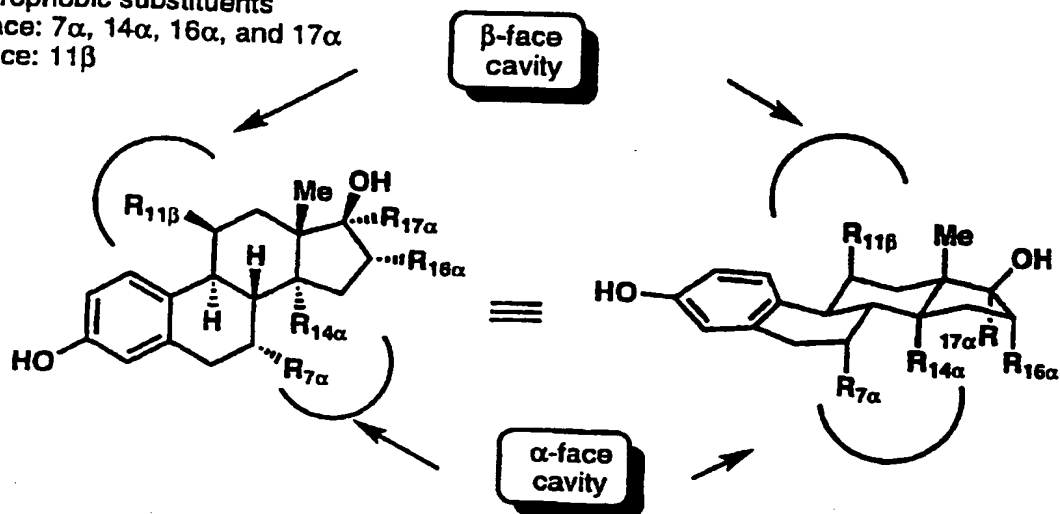


Zindoxifen

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**Figure 8a: affinity enhancing substituents marked by "R".**

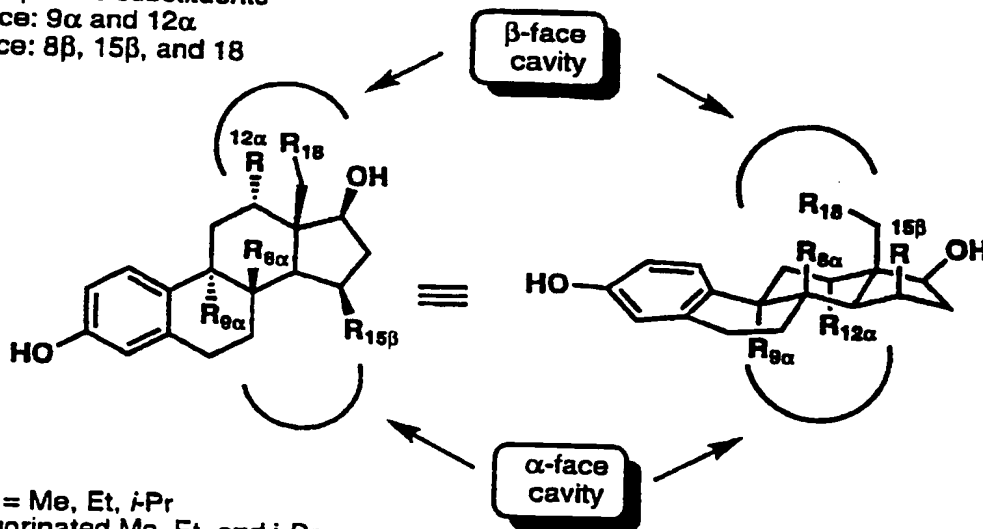
Covered by prior art:  
 hydrophobic substituents  
 $\alpha$ -face: 7 $\alpha$ , 14 $\alpha$ , 16 $\alpha$ , and 17 $\alpha$   
 $\beta$ -face: 11 $\beta$



Prior art reviewed in "The estradiol pharmacophore: ligand structure-estrogen receptor binding affinity relationships" G.M. Anstead, K.E. Carlson, and J.A. Katzenellenbogen, Steroids, 62(3):268-303 (1997).

**Figure 8b: affinity enhancing substituents marked by "R".**

Not covered by prior art:  
 hydrophobic substituents  
 $\alpha$ -face: 9 $\alpha$  and 12 $\alpha$   
 $\beta$ -face: 8 $\beta$ , 15 $\beta$ , and 18



R = Me, Et, i-Pr  
 fluorinated Me, Et, and i-Pr  
 Cl, Br, and I

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Figure 8c: affinity enhancing substituents marked by "R".

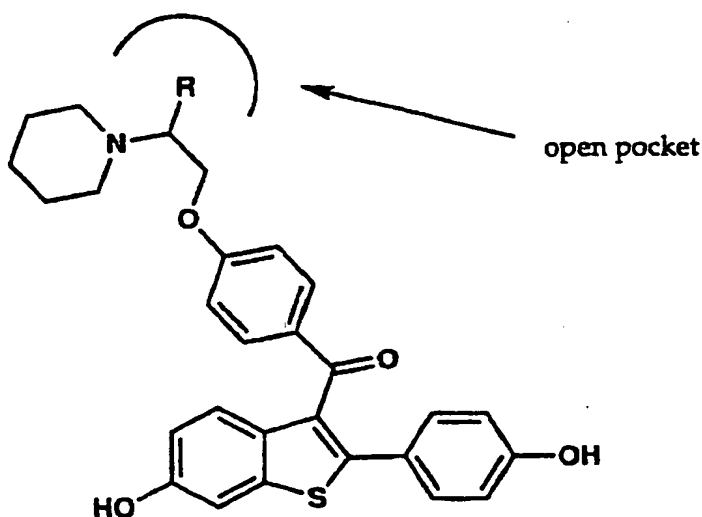
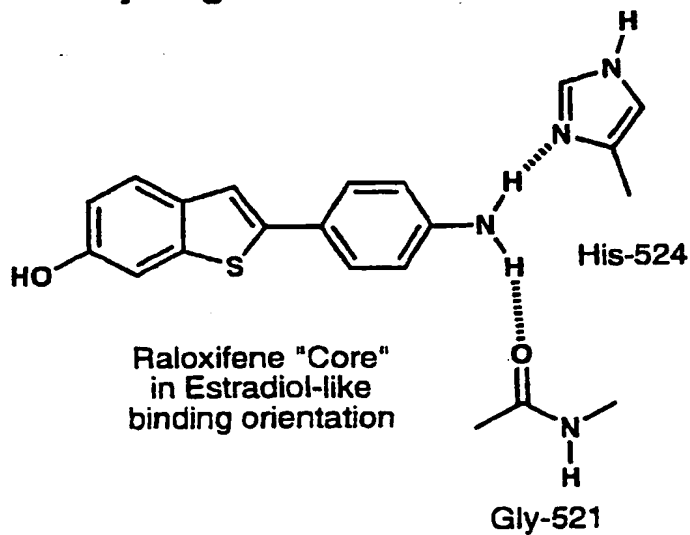
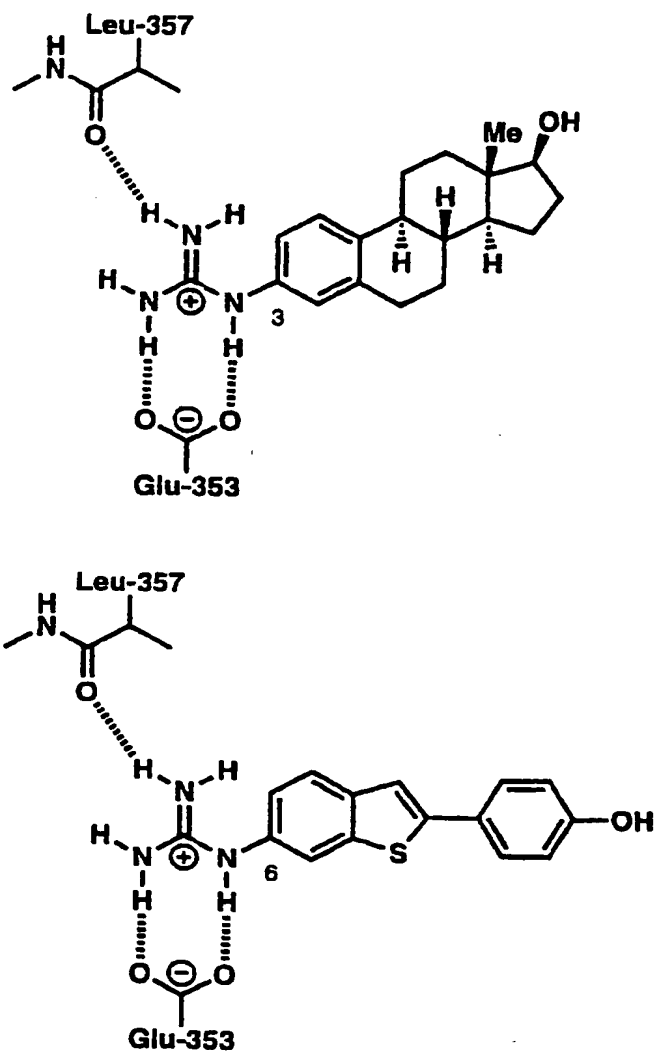


Figure 8d: affinity enhancing substituents. Replacement of 4'-OH group in raloxifene with 4'-NH<sub>2</sub> provides the opportunity of picking up an additional hydrogen bond to His-524.

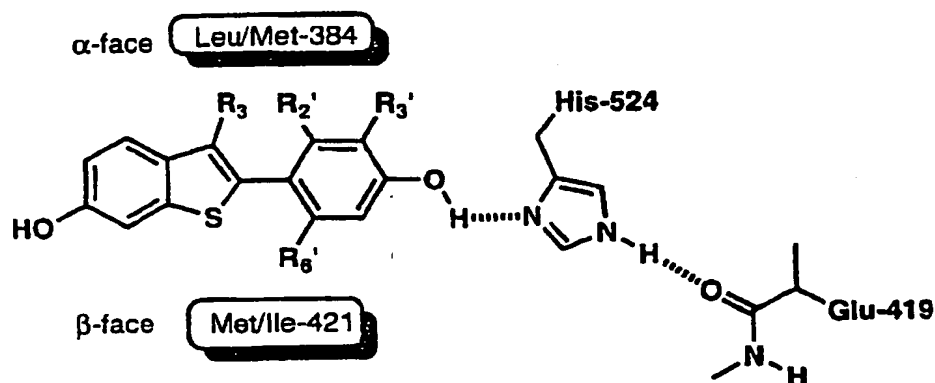


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**Figure 8e: guanidino affinity enhancing substituent at position-3 of the steroid nucleus and position-6 of the benzothiophene nucleus.**

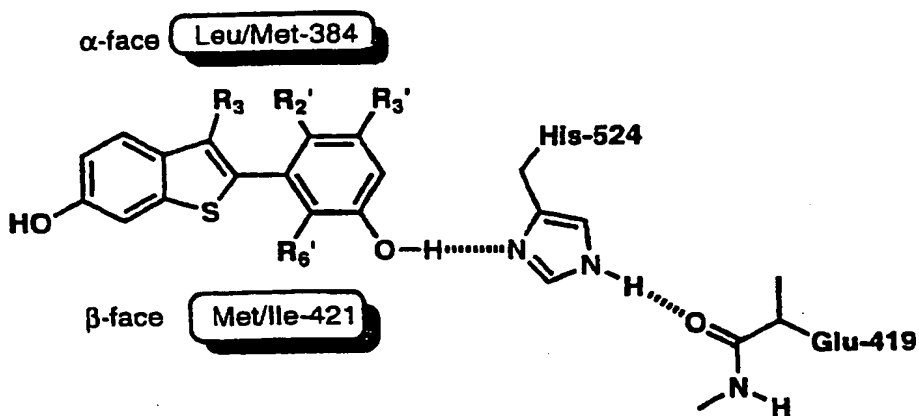


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Figure 9a: selectivity enhancing substituents  $R_3$ ,  $R_2'$ ,  $R_3'$ , and  $R_6'$ .

$R_3$ ,  $R_2'$ ,  $R_3'$ , and  $R_6'$  = Cl, Br, I, Me, Et, *i*-Pr, and perfluoro Me, Et, and *i*-Pr.

Figure 9b: selectivity enhancing substituents  $R_3$ ,  $R_2'$ ,  $R_3'$ , and  $R_6'$ .  
Movement of hydroxyl from position-4' to -5' biases binding orientation and therefore further enhances selectivity.

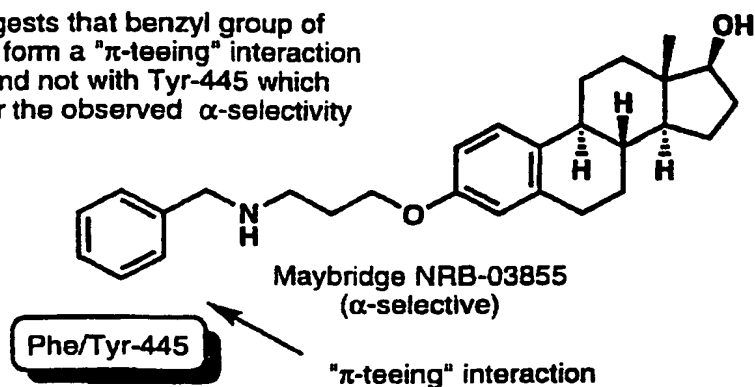
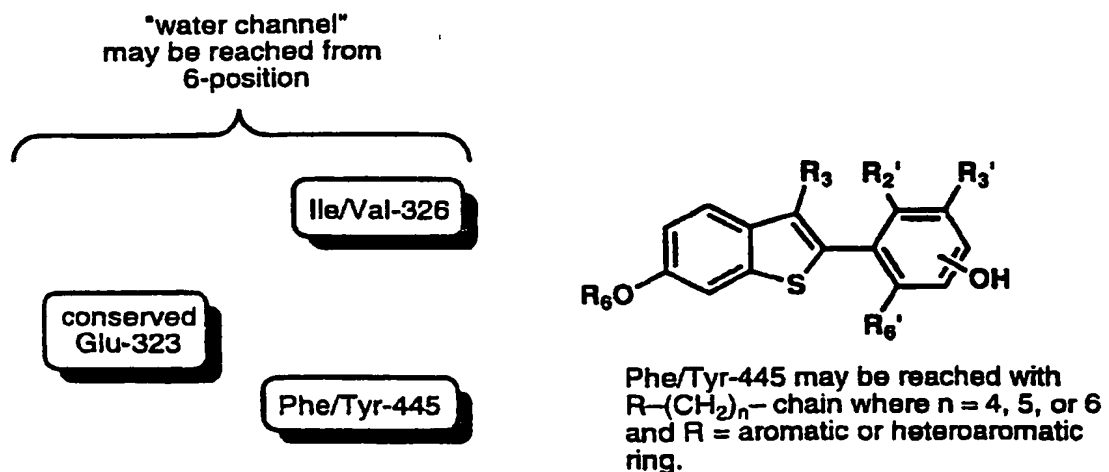


$R_3$ ,  $R_2'$ ,  $R_3'$ , and  $R_6'$  = Cl, Br, I, Me, Et, *i*-Pr, and perfluoro Me, Et, and *i*-Pr.

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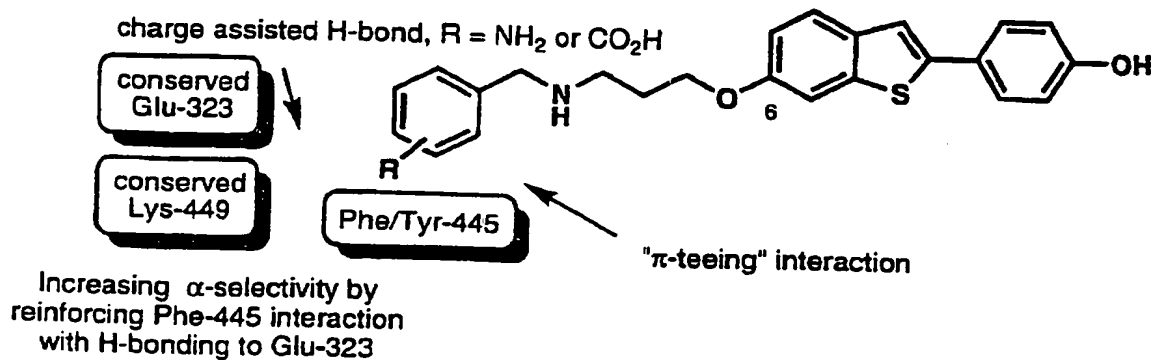
**Figure 9c: selectivity enhancing substituents  $R_3$ .**

modeling suggests that benzyl group of NRB-03855 may form a " $\pi$ -teeing" interaction with Phe-445 and not with Tyr-445 which may account for the observed  $\alpha$ -selectivity

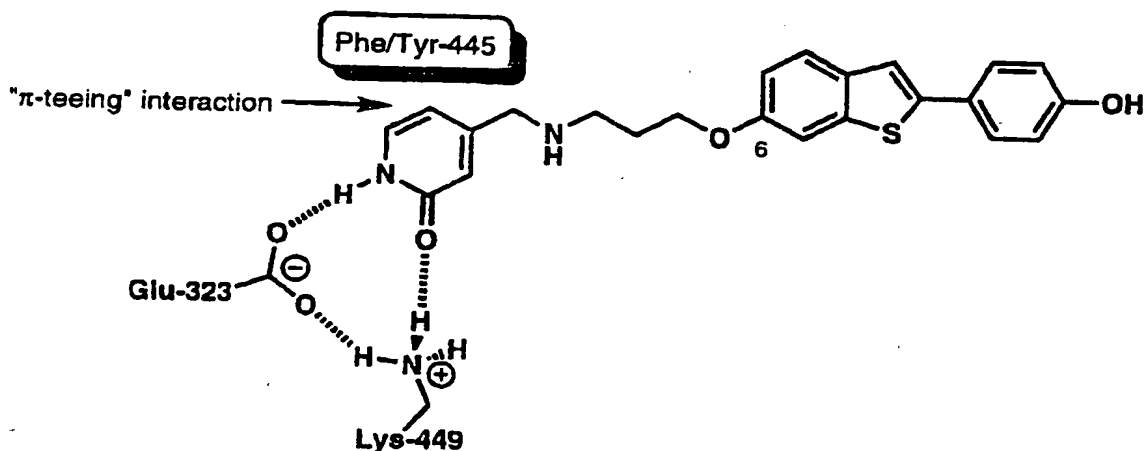
**Figure 9d: selectivity enhancing substituents  $R_6$ .**

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**Figure 9e: selectivity enhancement reinforced by charged assisted hydrogen bond between substituent "R" in the ligand and either Glu-323 or Lys-449 in the receptor.**



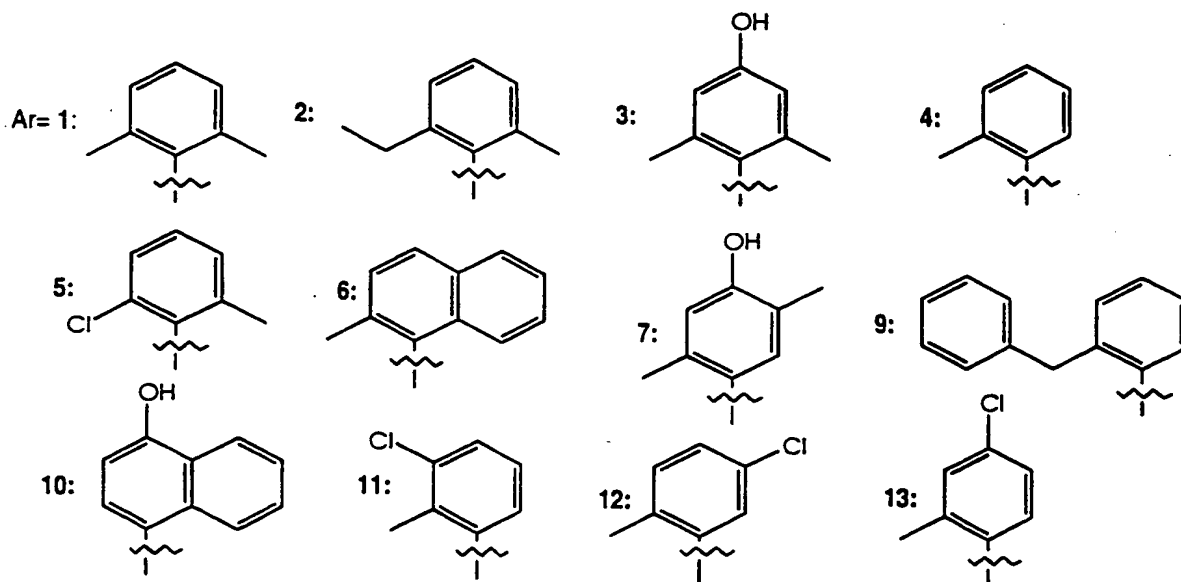
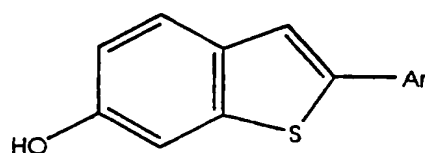
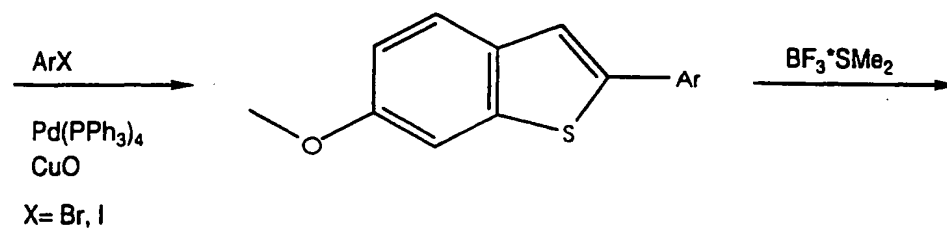
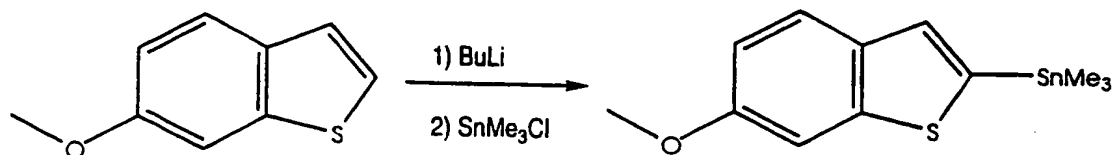
**Figure 9f: selectivity enhancement reinforced by hydrogen bond network between pyridone ring in the ligand and residues Glu-323 and Lys-449 in the receptor.**



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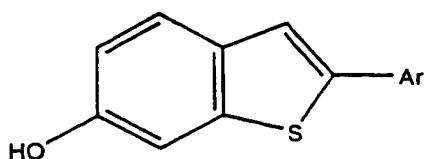
## FIGURE 10

Example 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 21, 23, 24, 25, 26

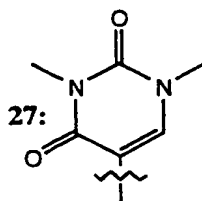
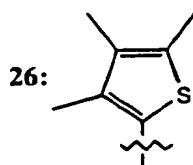
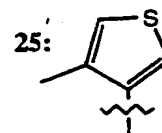
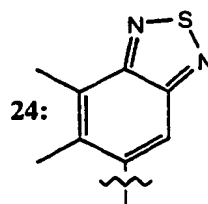
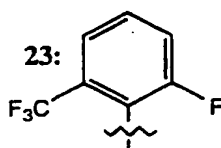
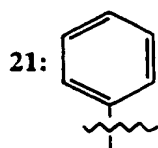
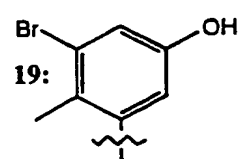
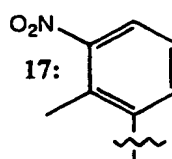
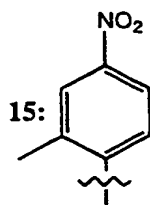
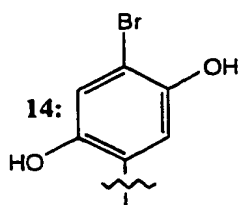


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FIGURE 10 continued



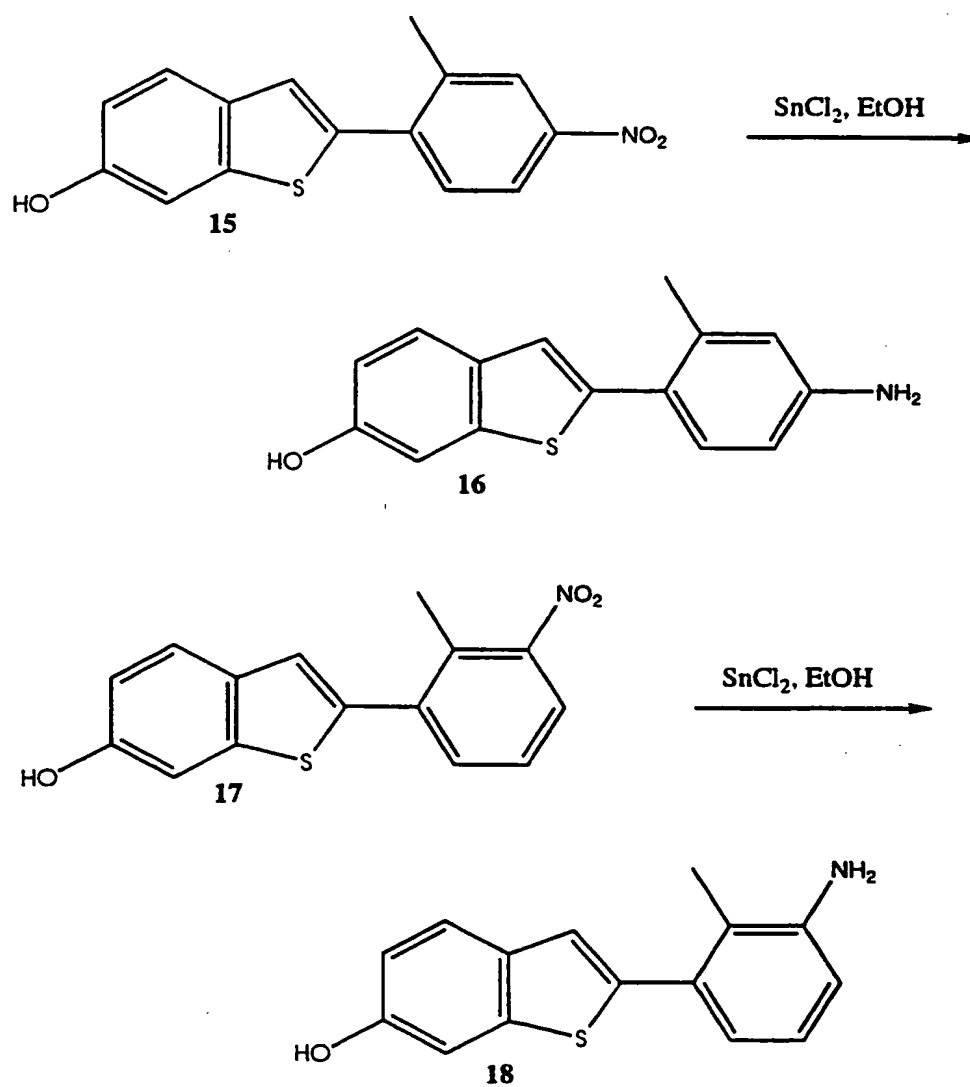
Ar=



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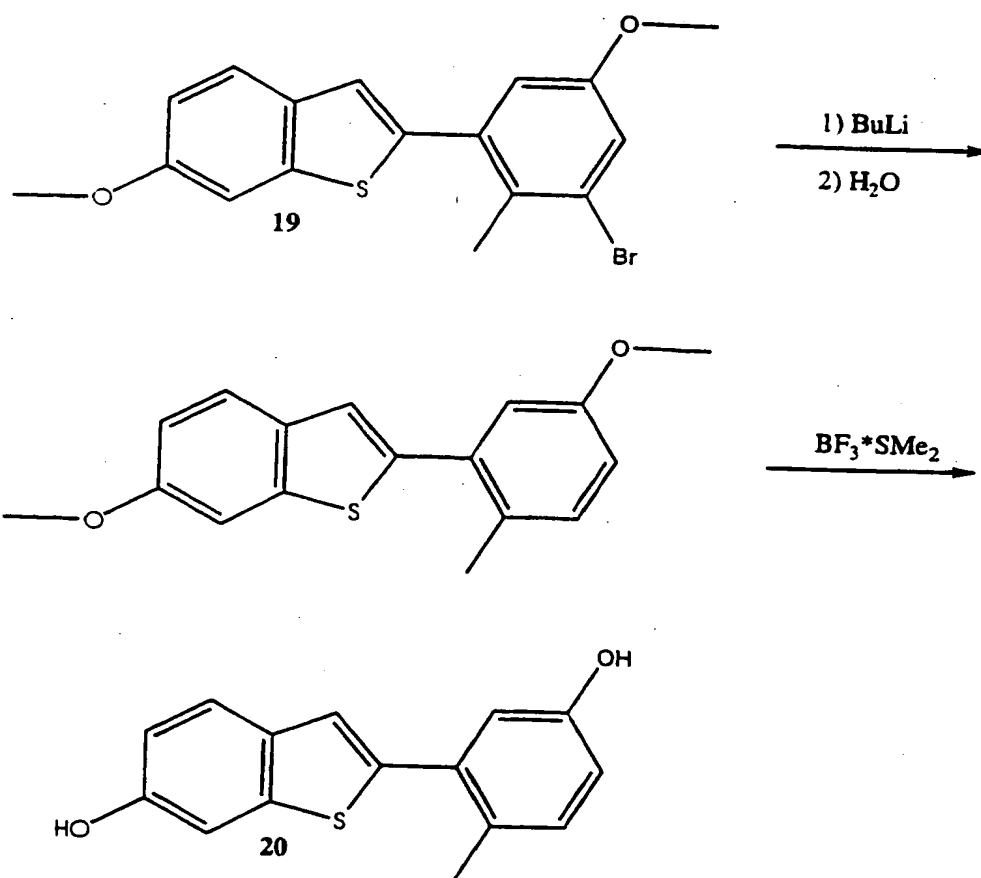
## FIGURE 11

Example 16,18



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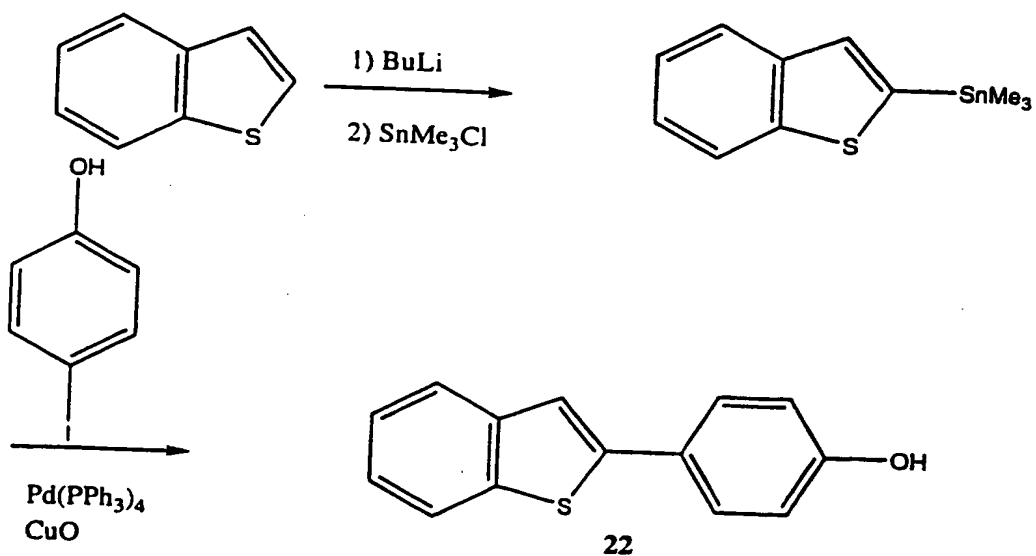
FIGURE 12



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## FIGURE 13

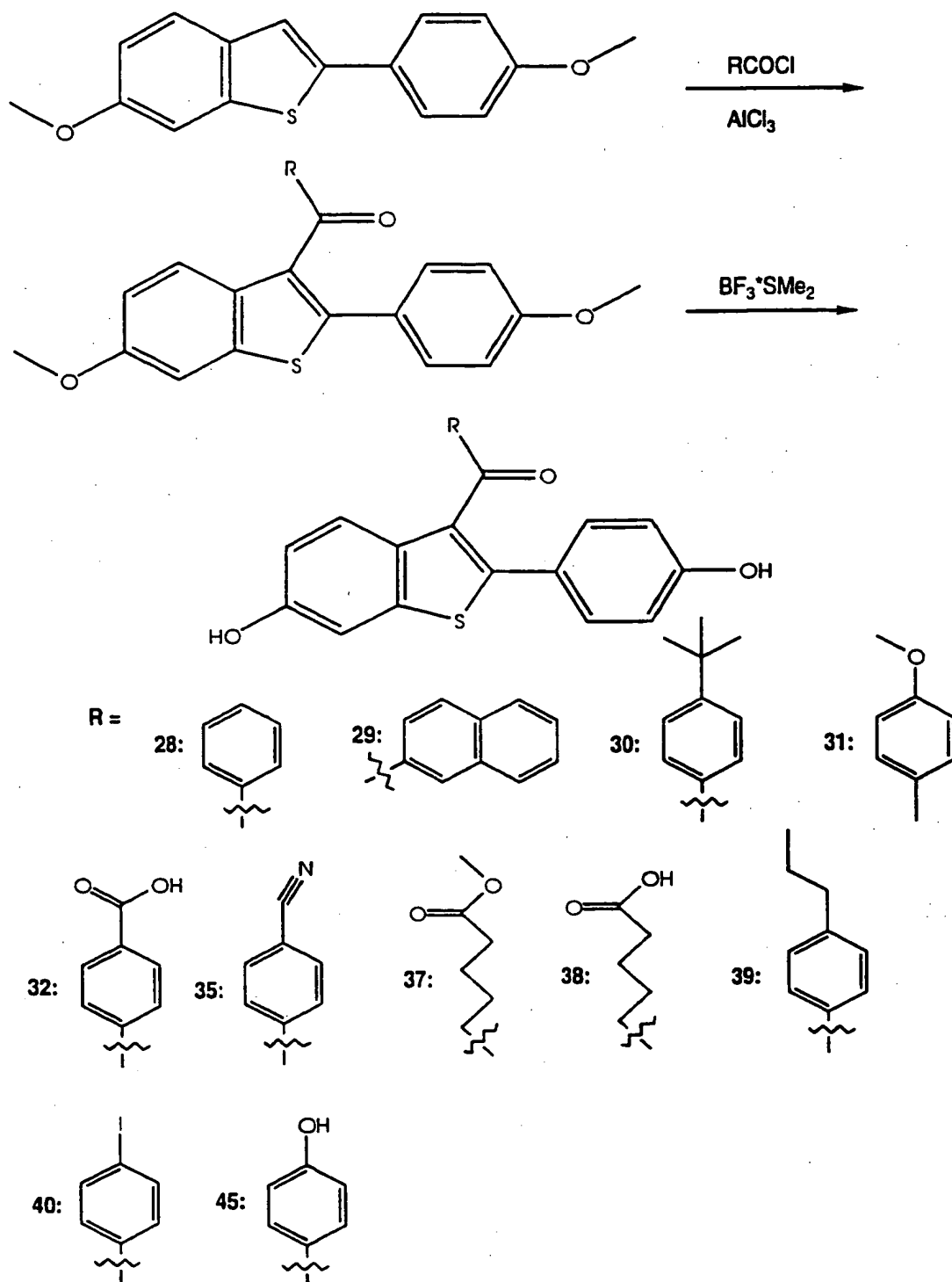
## Example 22



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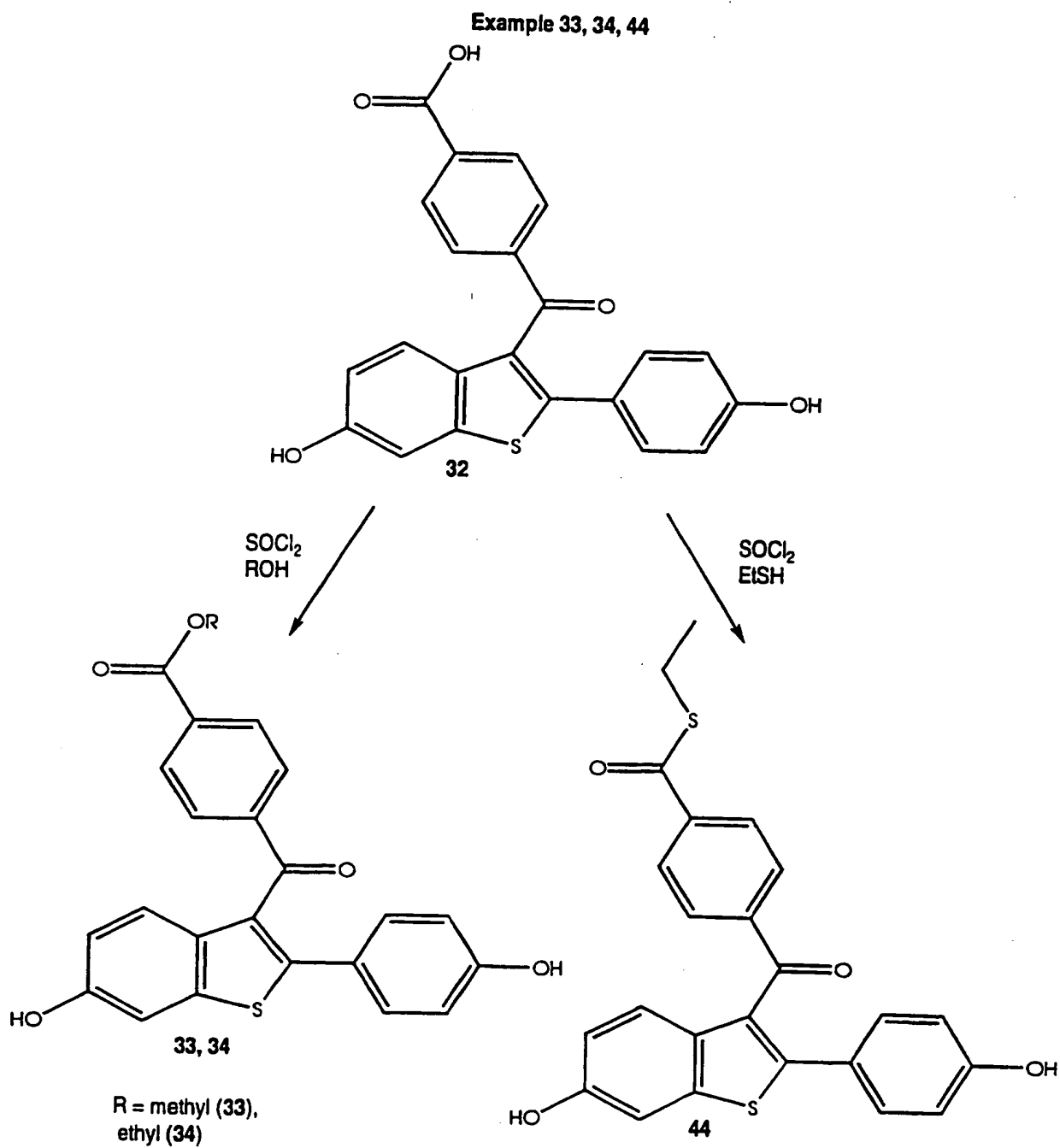
## FIGURE 14

Example 28, 29, 30, 31, 32, 35, 37, 38, 39, 40, 45



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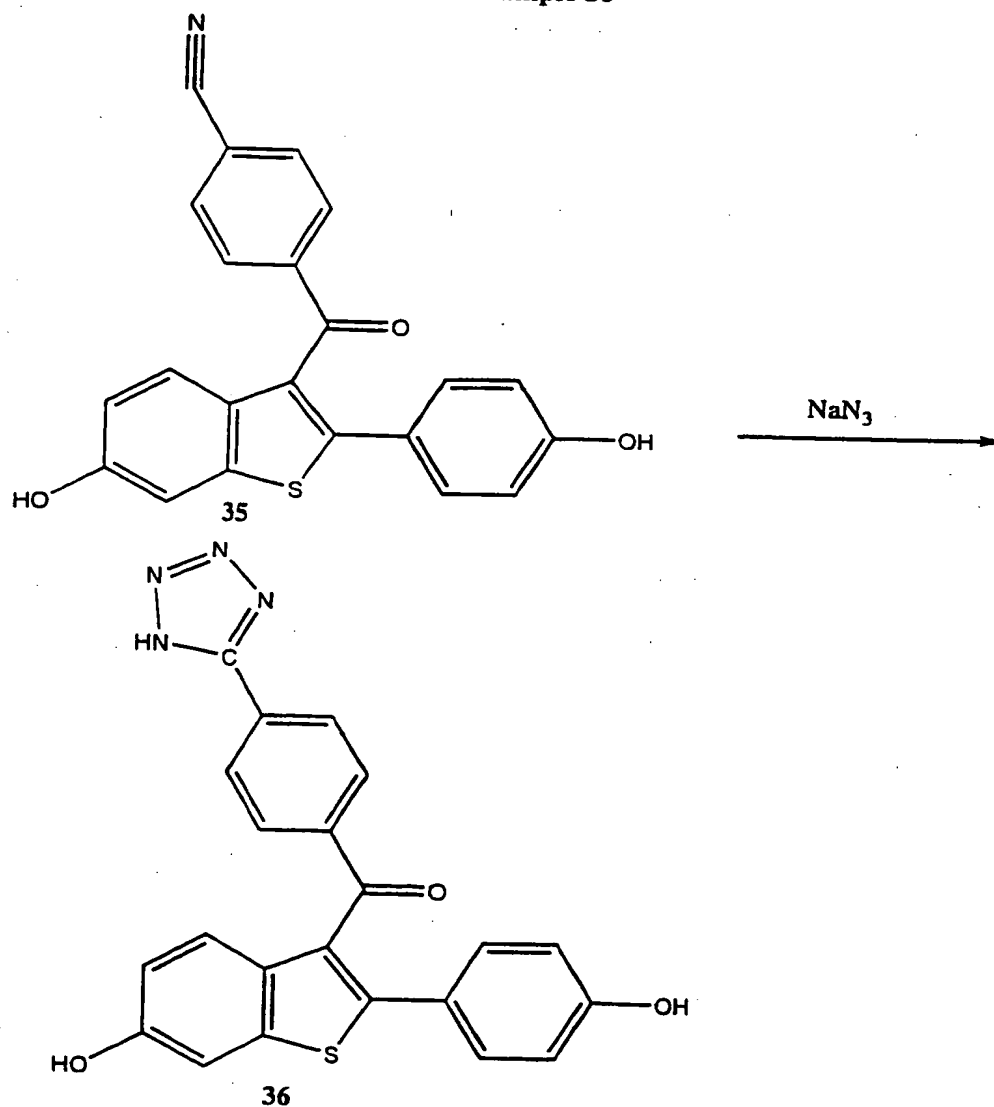
FIGURE 15



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FIGURE 16

## Example 36



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FIGURE 17

Example 41, 42, 43

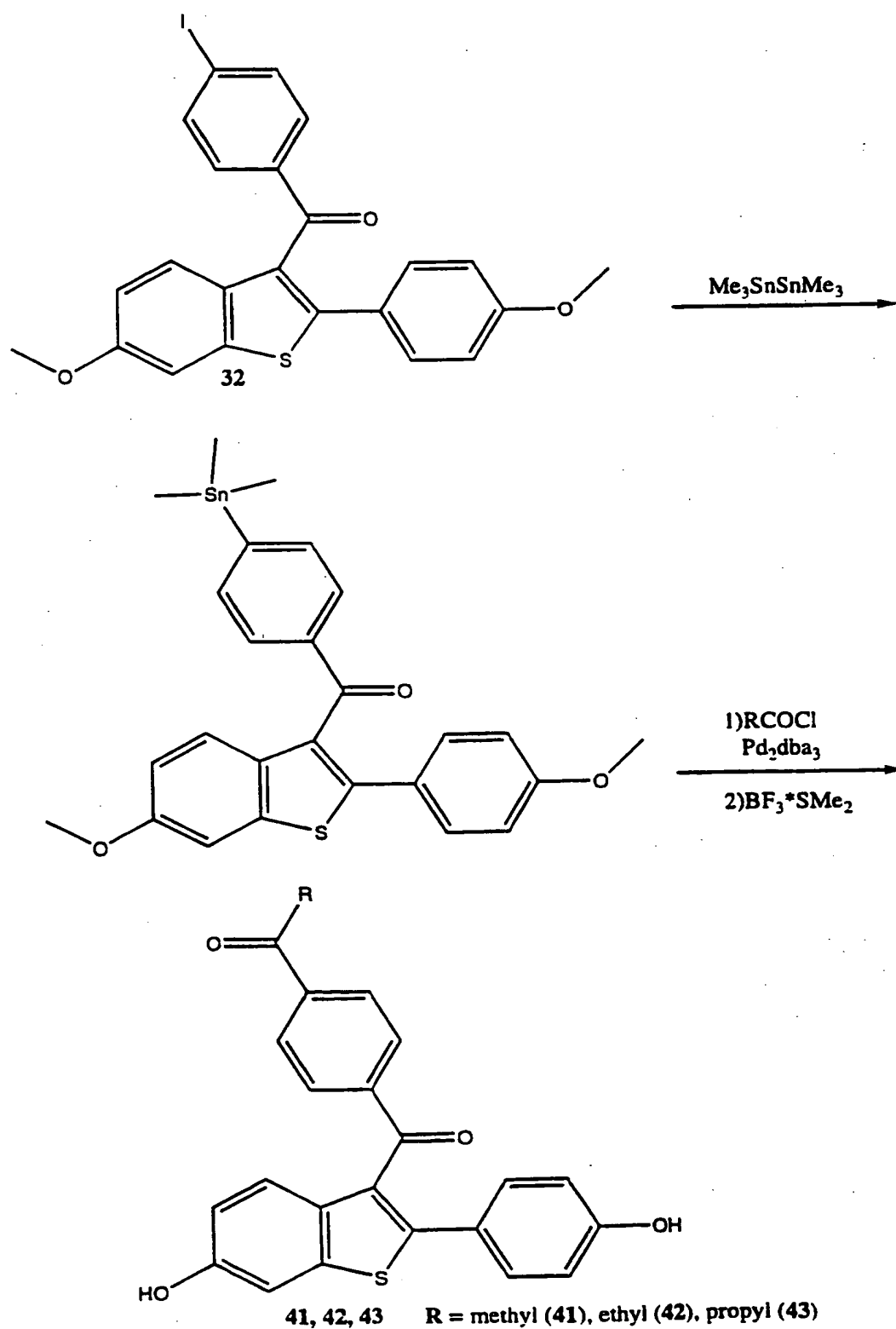
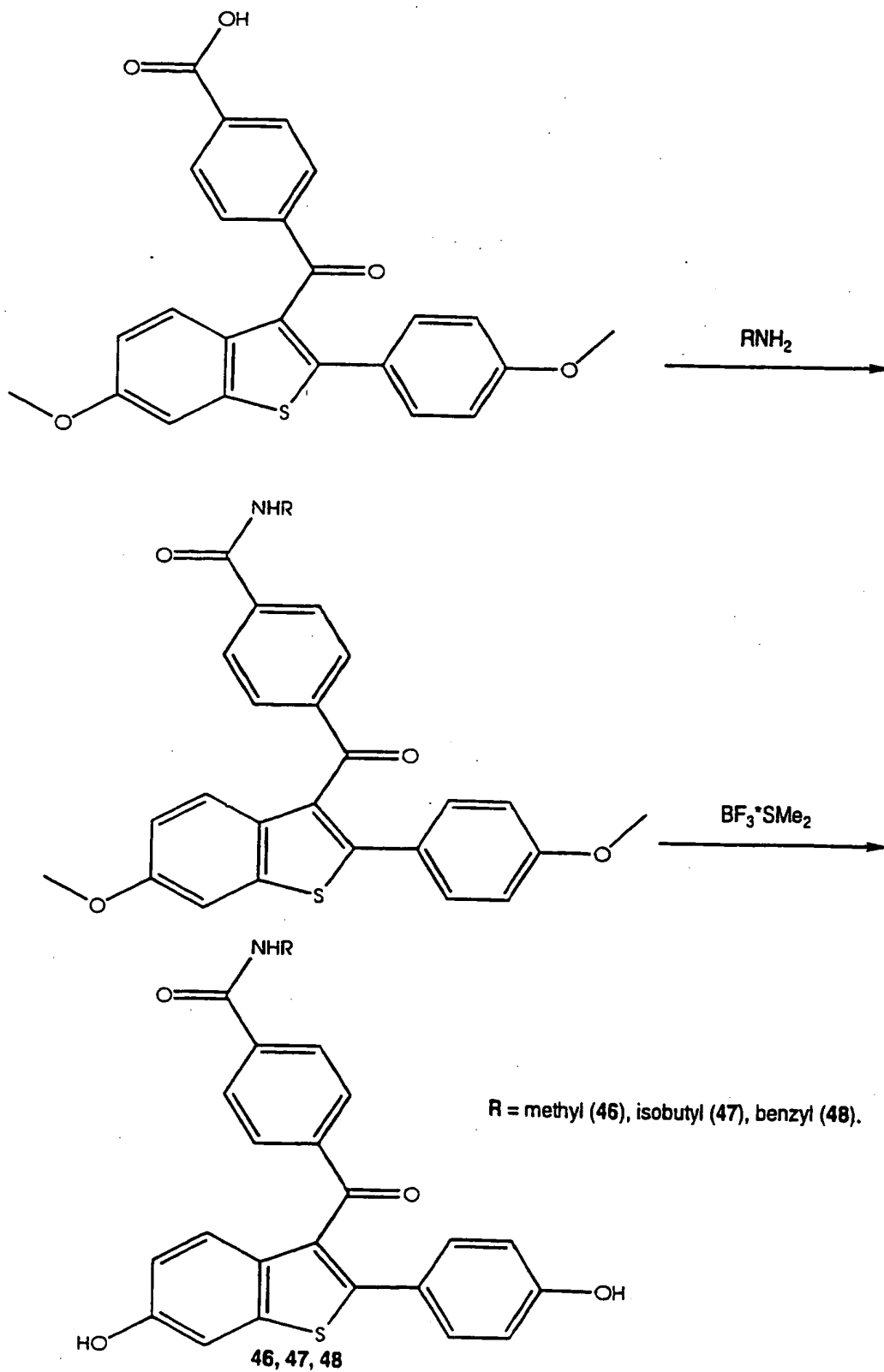


FIGURE 18

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Example 46, 47, 48

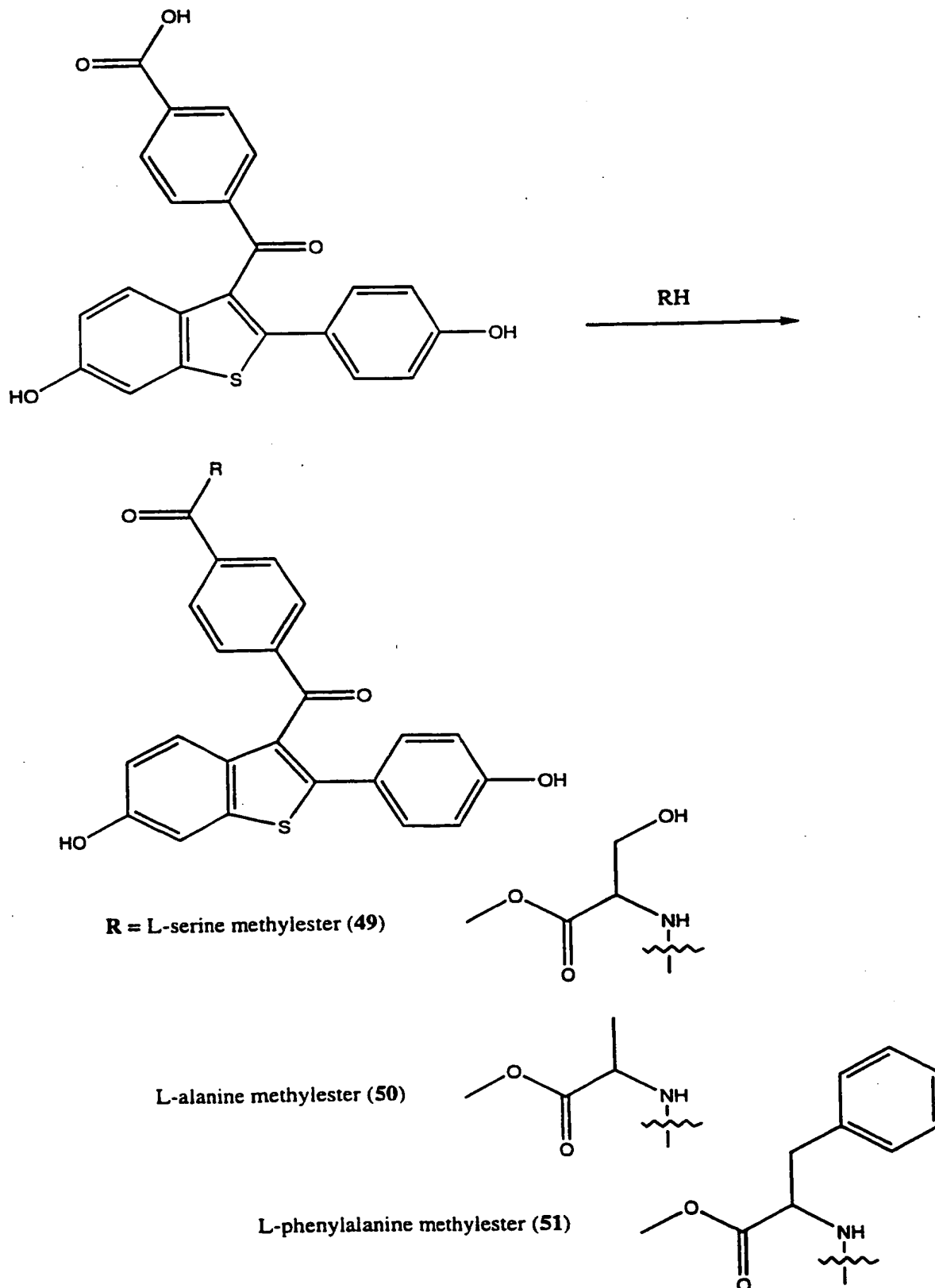


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## FIGURE 19

Example 49, 50, 51



## FIGURE 20

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HEADER NUCLEAR RECEPTOR 08-SEP-97 1ERR  
COMPND MOL\_ID: 1;  
COMPND 2 MOLECULE: OESTROGEN RECEPTOR;  
COMPND 3 CHAIN: A, B;  
COMPND 4 FRAGMENT: LIGAND-BINDING DOMAIN;  
COMPND 5 SYNONYM: ESTROGEN RECEPTOR, ER-LBD;  
COMPND 6 ENGINEERED: YES;  
COMPND 7 BIOLOGICAL\_UNIT: DIMER;  
COMPND 8 OTHER\_DETAILS: LIGAND-BINDING DOMAIN  
COMPND 9 (DOMAIN E - RESIDUES 301-553) IN COMPLEX WITH THE  
SELECTIVE  
COMPND 10 ANTAGONIST RALOXIFENE  
SOURCE MOL\_ID: 1;  
SOURCE 2 ORGANISM\_SCIENTIFIC: HOMO SAPIENS;  
SOURCE 3 ORGANISM\_COMMON: HUMAN;  
SOURCE 4 STRAIN: JM109;  
SOURCE 5 VARIANT: C1857;  
SOURCE 6 PLASMID: PEALPHA 35;  
SOURCE 7 GENE: ER ALPHA;  
SOURCE 8 EXPRESSION\_SYSTEM: ESCHERICHIA COLI;  
SOURCE 9 EXPRESSION\_SYSTEM\_STRAIN: JM109;  
SOURCE 10 EXPRESSION\_SYSTEM\_VARIANT: C1857;  
SOURCE 11 EXPRESSION\_SYSTEM\_PLASMID: PEALPHA 35  
AUTHOR A.M.BRZOZOWSKI,A.C.W.PIKE  
JRNL AUTH A.M.BRZOZOWSKI,A.C.W.PIKE,Z.DAUTER,R.E.HUBBARD,  
  
JRNL AUTH 2 T.BONN,O.ENGSTROM,L.OHMAN,G.L.GREENE,  
JRNL AUTH 3 J.-A.GUSTAFFSON,M.CARLQUIST  
JRNL TITL MOLECULAR BASIS OF AGONISM AND ANTAGONISM IN THE  
  
JRNL TITL 2 OESTROGEN RECEPTOR  
JRNL REF TO BE PUBLISHED  
JRNL REFN ASTM 0353  
REMARK 1  
REMARK 2  
REMARK 2 RESOLUTION. 2.6 ANGSTROMS.  
REMARK 3  
REMARK 3 REFINEMENT.  
REMARK 3 PROGRAM : REFMAC  
REMARK 3 AUTHORS : MURSHUDOV,VAGIN,DODSON  
REMARK 3  
REMARK 3 DATA USED IN REFINEMENT.  
REMARK 3 RESOLUTION RANGE HIGH (ANGSTROMS) : 2.6  
REMARK 3 RESOLUTION RANGE LOW (ANGSTROMS) : 25  
REMARK 3 DATA CUTOFF (SIGMA(F)) : 0  
REMARK 3 COMPLETENESS FOR RANGE (%) : 95.7  
REMARK 3 NUMBER OF REFLECTIONS : 15433  
REMARK 3  
REMARK 3 FIT TO DATA USED IN REFINEMENT.

SUBSTITUTE SHEET (RULE 26)

REMARK 3 CROSS-VALIDATION METHOD : THROUGHOUT  
REMARK 3 FREE R VALUE TEST SET SELECTION : RANDOM  
REMARK 3 R VALUE (WORKING + TEST SET) : NONE  
REMARK 3 R VALUE (WORKING SET) : 0.219  
REMARK 3 FREE R VALUE : 0.299  
REMARK 3 FREE R VALUE TEST SET SIZE (%) : 10  
REMARK 3 FREE R VALUE TEST SET COUNT : 1565  
REMARK 3  
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.

REMARK 3 PROTEIN ATOMS : 3553  
REMARK 3 NUCLEIC ACID ATOMS : 0  
REMARK 3 HETEROGEN ATOMS : 80  
REMARK 3 SOLVENT ATOMS : 100  
REMARK 3  
REMARK 6  
REMARK 6 ER-LBD WAS CARBOXYMETHYLATED PRIOR TO  
CRYSTALLISATION. ONLY  
REMARK 6 THE CARBOXYMETHYL GROUP BOUND TO CYS 381 COULD BE  
CLEARLY  
REMARK 6 LOCATED IN THE MAPS. THIS GROUP IS PRESENTED IN THE  
  
REMARK 6 COORDINATE FILE AS HET GROUP CBM 381 AT THE END OF EACH  
  
REMARK 6 CHAIN.  
REMARK 7  
REMARK 7 RESIDUES TYR331(A),ASP332(A),HIS377(B),GLU397(AB),  
REMARK 7 LYS416(AB),GLU419(AB),GLU423(B),LEU469(B),GLU470(AB),GLU471  
  
REMARK 7 (AB),LYS472(AB),ARG477(AB),LYS492(A),LYS529(B),GLU542(A),  
  
REMARK 7 ARG548(B) AND LEU549(B) WERE POORLY RESOLVED IN THE  
ELECTRON  
REMARK 7 DENSITY MAPS AND ARE NOT FULLY MODELLED IN THIS ENTRY.

REMARK 8  
REMARK 8 RESIDUES MODELLED IN ALTERNATE CONFORMATIONS:  
A373,A377,  
REMARK 8 A381,A473,A501,B455-B457,B501,B526.  
REMARK 999  
REMARK 999 SEQUENCE  
REMARK 999 REFERENCE: SER A 301 - LEU A 306 MISSING FROM PDB DUE TO  
DISORDER  
REMARK 999 REFERENCE: THR A 460 - LEU A 469 MISSING FROM PDB DUE TO  
DISORDER  
REMARK 999 REFERENCE: LYS A 529 - VAL A 534 MISSING FROM PDB DUE TO  
DISORDER  
REMARK 999 REFERENCE: ARG A 548 - THR A 553 MISSING FROM PDB DUE TO  
DISORDER

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REMARK 999 REFERENCE: SER B 301 - SER B 305 MISSING FROM PDB DUE TO DISORDER

REMARK 999 REFERENCE: ASP B 332 - GLU B 339 MISSING FROM PDB DUE TO DISORDER

REMARK 999 REFERENCE: THR B 460 - SER B 468 MISSING FROM PDB DUE TO DISORDER

REMARK 999 REFERENCE: CYS B 530 - PRO B 535 MISSING FROM PDB DUE TO DISORDER

REMARK 999 REFERENCE: PRO B 552 - THR B 553 MISSING FROM PDB DUE TO DISORDER

LINK C2 ACBM A 381 SG ACYS A 381

LINK C2 ACBM A 381 SG BCYS A 381

LINK C2 BCBM A 381 SG ACYS A 381

LINK C2 BCBM A 381 SG BCYS A 381

LINK C2 CBM B 381 SG CYS B 381

CISPEP 1 ARG A 335 PRO A 336 0 0.13

CRYST1 104.530 53.680 102.710 90.00 116.79 90.00 C 1 2 1 4

ORIGX1 1.000000 0.000000 0.000000 0.000000

ORIGX2 0.000000 1.000000 0.000000 0.000000

ORIGX3 0.000000 0.000000 1.000000 0.000000

SCALE1 0.009567 0.000000 0.004830 0.000000

SCALE2 0.000000 0.018629 0.000000 0.000000

SCALE3 0.000000 0.000000 0.010907 0.000000

MTRIX1 1 -0.740953 -0.502251 0.445794 74.86100 1

MTRIX2 1 -0.502316 -0.026089 -0.864290 122.90400 1

MTRIX3 1 0.445721 -0.864328 -0.232958 94.95000 1

ATOM 1 N ALA A 307 54.098 63.501 73.107 1.00101.44 N

ATOM 2 CA ALA A 307 53.995 62.069 72.653 1.00101.06 C

ATOM 3 C ALA A 307 52.966 61.945 71.536 1.00100.17 C

ATOM 4 O ALA A 307 53.280 61.646 70.377 1.00 99.09 O

ATOM 5 CB ALA A 307 53.690 61.140 73.815 1.00100.89 C

ATOM 6 N LEU A 308 51.722 62.276 71.868 1.00 99.53 N

ATOM 7 CA LEU A 308 50.596 62.259 70.953 1.00 99.09 C

ATOM 8 C LEU A 308 50.516 63.528 70.121 1.00 98.93 C

ATOM 9 O LEU A 308 49.540 63.825 69.426 1.00100.59 O

ATOM 10 CB LEU A 308 49.302 62.048 71.772 1.00 98.27 C

ATOM 11 CG LEU A 308 49.294 60.672 72.455 1.00 98.34 C

ATOM 12 CD1 LEU A 308 48.270 60.564 73.564 1.00 99.10 C

ATOM 13 CD2 LEU A 308 49.073 59.608 71.396 1.00 99.05 C

ATOM 14 N SER A 309 51.593 64.289 70.149 1.00 97.52 N

ATOM 15 CA SER A 309 51.799 65.546 69.479 1.00 94.74 C

ATOM 16 C SER A 309 52.762 65.407 68.308 1.00 90.63 C

ATOM 17 O SER A 309 53.020 66.365 67.590 1.00 91.89 O

ATOM 18 CB SER A 309 52.357 66.583 70.456 1.00 96.58 C

ATOM 19 OG SER A 309 52.346 66.102 71.800 1.00100.04 O

ATOM 20 N LEU A 310 53.298 64.214 68.092 1.00 85.74 N

ATOM 21 CA LEU A 310 54.212 64.025 66.973 1.00 80.17 C

ATOM 22 C LEU A 310 53.475 63.652 65.701 1.00 75.60 C

ATOM 23 O LEU A 310 52.519 62.877 65.644 1.00 75.27 O

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ATOM	24	CB	LEU A 310	55.259	62.961	67.314	1.00	82.19	C
ATOM	25	CG	LEU A 310	56.128	63.380	68.513	1.00	84.04	C
ATOM	26	CD1	LEU A 310	56.916	62.196	69.021	1.00	85.21	C
ATOM	27	CD2	LEU A 310	57.028	64.542	68.119	1.00	85.94	C
ATOM	28	N	THR A 311	53.925	64.277	64.620	1.00	69.23	N
ATOM	29	CA	THR A 311	53.347	64.005	63.307	1.00	65.09	C
ATOM	30	C	THR A 311	53.830	62.585	62.954	1.00	61.00	C
ATOM	31	O	THR A 311	54.838	62.147	63.496	1.00	56.82	O
ATOM	32	CB	THR A 311	53.884	64.913	62.189	1.00	66.58	C
ATOM	33	OG1	THR A 311	55.198	64.441	61.861	1.00	67.83	O
ATOM	34	CG2	THR A 311	53.990	66.380	62.503	1.00	66.63	C
ATOM	35	N	ALA A 312	53.190	62.002	61.942	1.00	59.73	N
ATOM	36	CA	ALA A 312	53.629	60.694	61.475	1.00	56.36	C
ATOM	37	C	ALA A 312	55.145	60.754	61.272	1.00	55.33	C
ATOM	38	O	ALA A 312	55.871	59.918	61.816	1.00	55.73	O
ATOM	39	CB	ALA A 312	53.021	60.320	60.154	1.00	55.64	C
ATOM	40	N	ASP A 313	55.562	61.758	60.497	1.00	55.51	N
ATOM	41	CA	ASP A 313	57.000	61.809	60.232	1.00	61.36	C
ATOM	42	C	ASP A 313	57.854	62.030	61.457	1.00	60.56	C
ATOM	43	O	ASP A 313	58.925	61.401	61.501	1.00	59.92	O
ATOM	44	CB	ASP A 313	57.421	62.678	59.065	1.00	66.00	C
ATOM	45	CG	ASP A 313	56.760	62.221	57.760	1.00	70.36	C
ATOM	46	OD1	ASP A 313	57.126	61.157	57.216	1.00	69.20	O
ATOM	47	OD2	ASP A 313	55.822	62.967	57.358	1.00	73.76	O
ATOM	48	N	GLN A 314	57.425	62.794	62.443	1.00	61.07	N
ATOM	49	CA	GLN A 314	58.238	63.006	63.637	1.00	63.62	C
ATOM	50	C	GLN A 314	58.386	61.687	64.414	1.00	60.76	C
ATOM	51	O	GLN A 314	59.476	61.412	64.904	1.00	60.44	O
ATOM	52	CB	GLN A 314	57.673	64.099	64.529	1.00	68.68	C
ATOM	53	CG	GLN A 314	57.411	65.462	63.876	1.00	72.34	C
ATOM	54	CD	GLN A 314	56.582	66.319	64.835	1.00	75.22	C
ATOM	55	OE1	GLN A 314	55.389	66.117	65.001	1.00	74.32	O
ATOM	56	NE2	GLN A 314	57.215	67.294	65.498	1.00	76.79	N
ATOM	57	N	MET A 315	57.321	60.921	64.486	1.00	57.60	N
ATOM	58	CA	MET A 315	57.248	59.628	65.129	1.00	54.58	C
ATOM	59	C	MET A 315	58.322	58.723	64.541	1.00	52.34	C
ATOM	60	O	MET A 315	59.175	58.099	65.180	1.00	49.28	O
ATOM	61	CB	MET A 315	55.852	59.057	64.781	1.00	59.63	C
ATOM	62	CG	MET A 315	55.573	57.619	65.179	1.00	61.37	C
ATOM	63	SD	MET A 315	55.131	57.546	66.947	1.00	67.38	S
ATOM	64	CE	MET A 315	56.797	57.583	67.603	1.00	65.02	C
ATOM	65	N	VAL A 316	58.280	58.672	63.198	1.00	49.88	N
ATOM	66	CA	VAL A 316	59.184	57.774	62.491	1.00	50.51	C
ATOM	67	C	VAL A 316	60.656	58.049	62.696	1.00	49.96	C
ATOM	68	O	VAL A 316	61.451	57.091	62.811	1.00	50.67	O
ATOM	69	CB	VAL A 316	58.854	57.823	60.983	1.00	52.04	C
ATOM	70	CG1	VAL A 316	59.711	56.828	60.214	1.00	51.77	C
ATOM	71	CG2	VAL A 316	57.367	57.602	60.863	1.00	50.35	C
ATOM	72	N	SER A 317	61.003	59.331	62.639	1.00	48.06	N

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ATOM	73	CA	SER A 317	62.423	59.721	62.777	1.00	48.67	C
ATOM	74	C	SER A 317	62.813	59.525	64.238	1.00	47.57	C
ATOM	75	O	SER A 317	63.778	58.816	64.595	1.00	48.05	O
ATOM	76	CB	SER A 317	62.430	61.196	62.364	1.00	49.56	C
ATOM	77	OG	SER A 317	61.339	61.700	63.181	1.00	54.05	O
ATOM	78	N	ALA A 318	62.000	60.024	65.158	1.00	43.79	N
ATOM	79	CA	ALA A 318	62.259	59.753	66.577	1.00	42.79	C
ATOM	80	C	ALA A 318	62.622	58.278	66.738	1.00	46.07	C
ATOM	81	O	ALA A 318	63.724	57.937	67.164	1.00	48.86	O
ATOM	82	CB	ALA A 318	60.958	60.040	67.312	1.00	43.54	C
ATOM	83	N	LEU A 319	61.721	57.372	66.259	1.00	44.84	N
ATOM	84	CA	LEU A 319	61.958	55.967	66.457	1.00	39.49	C
ATOM	85	C	LEU A 319	63.249	55.560	65.808	1.00	41.35	C
ATOM	86	O	LEU A 319	64.114	54.940	66.442	1.00	43.08	O
ATOM	87	CB	LEU A 319	60.818	55.095	66.132	1.00	35.20	C
ATOM	88	CG	LEU A 319	59.455	55.190	66.778	1.00	34.47	C
ATOM	89	CD1	LEU A 319	58.471	54.330	65.923	1.00	33.78	C
ATOM	90	CD2	LEU A 319	59.388	54.770	68.217	1.00	28.80	C
ATOM	91	N	LEU A 320	63.462	55.915	64.567	1.00	46.80	N
ATOM	92	CA	LEU A 320	64.721	55.511	63.886	1.00	48.28	C
ATOM	93	C	LEU A 320	65.946	55.905	64.667	1.00	49.61	C
ATOM	94	O	LEU A 320	66.922	55.170	64.714	1.00	50.99	O
ATOM	95	CB	LEU A 320	64.715	56.108	62.472	1.00	48.30	C
ATOM	96	CG	LEU A 320	63.875	55.286	61.483	1.00	49.80	C
ATOM	97	CD1	LEU A 320	63.709	55.967	60.158	1.00	49.05	C
ATOM	98	CD2	LEU A 320	64.519	53.925	61.255	1.00	51.04	C
ATOM	99	N	ASP A 321	65.935	57.068	65.308	1.00	53.09	N
ATOM	100	CA	ASP A 321	67.033	57.589	66.105	1.00	53.45	C
ATOM	101	C	ASP A 321	67.294	56.752	67.337	1.00	48.52	C
ATOM	102	O	ASP A 321	68.447	56.506	67.654	1.00	52.66	O
ATOM	103	CB	ASP A 321	66.739	59.000	66.649	1.00	57.98	C
ATOM	104	CG	ASP A 321	67.872	59.919	66.255	1.00	63.89	C
ATOM	105	OD1	ASP A 321	68.362	59.817	65.107	1.00	66.13	O
ATOM	106	OD2	ASP A 321	68.276	60.724	67.122	1.00	69.06	O
ATOM	107	N	ALA A 322	66.228	56.278	67.943	1.00	41.85	N
ATOM	108	CA	ALA A 322	66.295	55.442	69.123	1.00	36.67	C
ATOM	109	C	ALA A 322	66.794	54.049	68.847	1.00	33.38	C
ATOM	110	O	ALA A 322	66.970	53.238	69.749	1.00	34.81	O
ATOM	111	CB	ALA A 322	64.909	55.394	69.764	1.00	36.73	C
ATOM	112	N	GLU A 323	67.078	53.724	67.616	1.00	31.88	N
ATOM	113	CA	GLU A 323	67.392	52.340	67.287	1.00	34.43	C
ATOM	114	C	GLU A 323	68.526	51.925	68.094	1.00	35.40	C
ATOM	115	O	GLU A 323	69.427	52.756	68.242	1.00	44.66	O
ATOM	116	CB	GLU A 323	67.529	52.209	65.773	1.00	35.17	C
ATOM	117	CG	GLU A 323	66.158	51.707	65.178	1.00	38.58	C
ATOM	118	CD	GLU A 323	65.893	50.295	65.659	1.00	39.26	C
ATOM	119	OE1	GLU A 323	66.456	49.328	65.149	1.00	42.62	O
ATOM	120	OE2	GLU A 323	65.132	50.082	66.607	1.00	42.24	O
ATOM	121	N	PRO A 324	68.537	50.780	68.697	1.00	37.20	N

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ATOM	122	CA	PRO A 324	69.755	50.328	69.431	1.00	37.25	C
ATOM	123	C	PRO A 324	70.811	50.012	68.373	1.00	37.44	C
ATOM	124	O	PRO A 324	70.483	49.787	67.218	1.00	38.76	O
ATOM	125	CB	PRO A 324	69.416	49.034	70.128	1.00	33.21	C
ATOM	126	CG	PRO A 324	68.160	48.636	69.459	1.00	33.49	C
ATOM	127	CD	PRO A 324	67.551	49.752	68.621	1.00	34.65	C
ATOM	128	N	PRO A 325	72.044	49.948	68.804	1.00	36.23	N
ATOM	129	CA	PRO A 325	73.174	49.603	67.970	1.00	34.39	C
ATOM	130	C	PRO A 325	73.223	48.132	67.679	1.00	36.48	C
ATOM	131	O	PRO A 325	72.707	47.405	68.550	1.00	43.04	O
ATOM	132	CB	PRO A 325	74.395	49.931	68.883	1.00	30.34	C
ATOM	133	CG	PRO A 325	73.826	49.651	70.222	1.00	33.20	C
ATOM	134	CD	PRO A 325	72.412	50.153	70.200	1.00	35.18	C
ATOM	135	N	ILE A 326	73.844	47.574	66.682	1.00	37.00	N
ATOM	136	CA	ILE A 326	73.891	46.094	66.592	1.00	35.96	C
ATOM	137	C	ILE A 326	75.121	45.635	67.301	1.00	39.02	C
ATOM	138	O	ILE A 326	76.214	46.058	66.903	1.00	47.09	O
ATOM	139	CB	ILE A 326	73.877	45.664	65.119	1.00	37.18	C
ATOM	140	CG1	ILE A 326	72.440	45.960	64.571	1.00	33.71	C
ATOM	141	CG2	ILE A 326	74.228	44.209	64.877	1.00	34.30	C
ATOM	142	CD1	ILE A 326	72.322	45.838	63.110	1.00	32.65	C
ATOM	143	N	LEU A 327	75.061	44.831	68.339	1.00	38.76	N
ATOM	144	CA	LEU A 327	76.223	44.386	69.099	1.00	33.89	C
ATOM	145	C	LEU A 327	76.869	43.164	68.493	1.00	37.30	C
ATOM	146	O	LEU A 327	76.300	42.514	67.653	1.00	35.59	O
ATOM	147	CB	LEU A 327	75.761	44.038	70.533	1.00	31.03	C
ATOM	148	CG	LEU A 327	75.027	45.176	71.259	1.00	31.56	C
ATOM	149	CD1	LEU A 327	74.951	44.900	72.762	1.00	28.63	C
ATOM	150	CD2	LEU A 327	75.747	46.531	71.068	1.00	29.79	C
ATOM	151	N	TYR A 328	78.065	42.777	68.973	1.00	39.80	N
ATOM	152	CA	TYR A 328	78.752	41.596	68.506	1.00	38.44	C
ATOM	153	C	TYR A 328	78.791	40.517	69.572	1.00	42.46	C
ATOM	154	O	TYR A 328	78.752	40.739	70.808	1.00	40.42	O
ATOM	155	CB	TYR A 328	80.223	41.999	68.242	1.00	39.84	C
ATOM	156	CG	TYR A 328	80.429	42.530	66.862	1.00	44.53	C
ATOM	157	CD1	TYR A 328	80.133	43.840	66.561	1.00	46.24	C
ATOM	158	CD2	TYR A 328	80.912	41.696	65.840	1.00	48.79	C
ATOM	159	CE1	TYR A 328	80.305	44.316	65.284	1.00	50.15	C
ATOM	160	CE2	TYR A 328	81.078	42.159	64.556	1.00	49.24	C
ATOM	161	CZ	TYR A 328	80.754	43.475	64.302	1.00	52.20	C
ATOM	162	OH	TYR A 328	80.907	44.010	63.033	1.00	59.80	O
ATOM	163	N	SER A 329	79.057	39.298	69.107	1.00	45.70	N
ATOM	164	CA	SER A 329	79.214	38.169	70.008	1.00	51.02	C
ATOM	165	C	SER A 329	80.586	38.188	70.668	1.00	56.51	C
ATOM	166	O	SER A 329	81.548	38.612	70.018	1.00	55.49	O
ATOM	167	CB	SER A 329	79.156	36.880	69.159	1.00	50.86	C
ATOM	168	OG	SER A 329	79.310	35.775	70.062	1.00	52.63	O
ATOM	169	N	GLU A 330	80.706	37.683	71.878	1.00	65.75	N
ATOM	170	CA	GLU A 330	82.025	37.611	72.521	1.00	76.01	C

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ATOM	171	C	GLU A 330	82.960	37.133	71.396	1.00	81.00	C
ATOM	172	O	GLU A 330	82.675	36.107	70.813	1.00	79.13	O
ATOM	173	CB	GLU A 330	82.071	36.616	73.647	1.00	79.87	C
ATOM	174	CG	GLU A 330	80.998	36.670	74.700	1.00	84.53	C
ATOM	175	CD	GLU A 330	81.061	35.563	75.738	1.00	88.62	C
ATOM	176	OE1	GLU A 330	80.793	34.362	75.470	1.00	88.61	O
ATOM	177	OE2	GLU A 330	81.382	35.913	76.917	1.00	89.74	O
ATOM	178	N	TYR A 331	83.985	37.902	71.102	1.00	91.50	N
ATOM	179	CA	TYR A 331	84.918	37.609	70.032	1.00	100.48	C
ATOM	180	C	TYR A 331	85.340	36.141	70.038	1.00	107.14	C
ATOM	181	O	TYR A 331	85.517	35.555	71.101	1.00	108.63	O
ATOM	182	CB	TYR A 331	86.138	38.522	70.026	1.00	99.32	C
ATOM	190	N	ASP A 332	85.477	35.582	68.851	1.00	114.50	N
ATOM	191	CA	ASP A 332	85.796	34.214	68.578	1.00	120.41	C
ATOM	192	C	ASP A 332	86.261	33.397	69.761	1.00	124.62	C
ATOM	193	O	ASP A 332	87.442	33.398	70.107	1.00	125.40	O
ATOM	194	CB	ASP A 332	86.895	34.137	67.490	1.00	120.22	C
ATOM	198	N	PRO A 333	85.358	32.668	70.380	1.00	128.51	N
ATOM	199	CA	PRO A 333	85.716	31.776	71.485	1.00	130.41	C
ATOM	200	C	PRO A 333	86.343	30.548	70.821	1.00	131.42	C
ATOM	201	O	PRO A 333	87.547	30.533	70.554	1.00	133.43	O
ATOM	202	CB	PRO A 333	84.415	31.426	72.212	1.00	130.17	C
ATOM	203	CG	PRO A 333	83.390	31.669	71.139	1.00	129.68	C
ATOM	204	CD	PRO A 333	83.944	32.552	70.043	1.00	128.77	C
ATOM	205	N	THR A 334	85.516	29.556	70.526	1.00	130.47	N
ATOM	206	CA	THR A 334	85.948	28.337	69.884	1.00	129.25	C
ATOM	207	C	THR A 334	84.785	27.632	69.178	1.00	127.54	C
ATOM	208	O	THR A 334	83.666	27.547	69.667	1.00	125.84	O
ATOM	209	CB	THR A 334	86.605	27.340	70.853	1.00	129.94	C
ATOM	210	OG1	THR A 334	86.141	27.528	72.189	1.00	129.64	O
ATOM	211	CG2	THR A 334	88.121	27.474	70.833	1.00	131.04	C
ATOM	212	N	ARG A 335	85.107	27.111	67.999	1.00	125.90	N
ATOM	213	CA	ARG A 335	84.113	26.382	67.198	1.00	123.68	C
ATOM	214	C	ARG A 335	84.728	25.036	66.825	1.00	119.67	C
ATOM	215	O	ARG A 335	85.940	24.931	66.633	1.00	119.78	O
ATOM	216	CB	ARG A 335	83.720	27.231	66.009	1.00	125.31	C
ATOM	217	CG	ARG A 335	82.285	27.149	65.540	1.00	127.03	C
ATOM	218	CD	ARG A 335	81.655	28.529	65.578	1.00	128.25	C
ATOM	219	NE	ARG A 335	82.347	29.451	64.686	1.00	129.98	N
ATOM	220	CZ	ARG A 335	81.682	30.315	63.921	1.00	130.52	C
ATOM	221	NH1	ARG A 335	80.362	30.335	63.971	1.00	129.82	N
ATOM	222	NH2	ARG A 335	82.367	31.123	63.131	1.00	131.96	N
ATOM	223	N	PRO A 336	83.912	24.016	66.729	1.00	115.59	N
ATOM	224	CA	PRO A 336	82.489	24.100	66.951	1.00	113.40	C
ATOM	225	C	PRO A 336	82.114	24.304	68.410	1.00	111.16	C
ATOM	226	O	PRO A 336	82.732	23.804	69.352	1.00	110.30	O
ATOM	227	CB	PRO A 336	81.900	22.777	66.413	1.00	113.87	C
ATOM	228	CG	PRO A 336	83.075	21.850	66.561	1.00	113.87	C
ATOM	229	CD	PRO A 336	84.336	22.658	66.384	1.00	114.86	C

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ATOM	230	N	PHE A 337	81.056	25.072	68.653	1.00108.59	N
ATOM	231	CA	PHE A 337	80.592	25.302	70.005	1.00107.41	C
ATOM	232	C	PHE A 337	79.944	24.019	70.544	1.00105.98	C
ATOM	233	O	PHE A 337	79.608	23.095	69.811	1.00105.97	O
ATOM	234	CB	PHE A 337	79.494	26.381	70.074	1.00108.40	C
ATOM	235	CG	PHE A 337	79.786	27.668	69.384	1.00109.05	C
ATOM	236	CD1	PHE A 337	80.817	28.477	69.826	1.00110.21	C
ATOM	237	CD2	PHE A 337	79.061	28.082	68.283	1.00109.60	C
ATOM	238	CE1	PHE A 337	81.137	29.655	69.173	1.00110.99	C
ATOM	239	CE2	PHE A 337	79.344	29.276	67.646	1.00110.17	C
ATOM	240	CZ	PHE A 337	80.379	30.077	68.098	1.00110.36	C
ATOM	241	N	SER A 338	79.684	24.056	71.839	1.00104.12	N
ATOM	242	CA	SER A 338	78.921	23.005	72.510	1.00101.32	C
ATOM	243	C	SER A 338	77.542	23.619	72.828	1.00 99.90	C
ATOM	244	O	SER A 338	77.245	24.736	72.394	1.00 98.36	O
ATOM	245	CB	SER A 338	79.628	22.537	73.768	1.00 99.85	C
ATOM	246	OG	SER A 338	79.630	23.506	74.795	1.00 98.71	O
ATOM	247	N	GLU A 339	76.720	22.900	73.575	1.00 98.70	N
ATOM	248	CA	GLU A 339	75.412	23.419	73.948	1.00 97.01	C
ATOM	249	C	GLU A 339	75.629	24.565	74.947	1.00 92.79	C
ATOM	250	O	GLU A 339	75.146	25.676	74.716	1.00 91.77	O
ATOM	251	CB	GLU A 339	74.542	22.333	74.539	1.00101.76	C
ATOM	252	CG	GLU A 339	73.174	22.808	75.040	1.00106.56	C
ATOM	253	CD	GLU A 339	72.364	21.658	75.609	1.00109.74	C
ATOM	254	OE1	GLU A 339	72.856	20.503	75.549	1.00112.97	O
ATOM	255	OE2	GLU A 339	71.247	21.895	76.114	1.00110.41	O
ATOM	256	N	ALA A 340	76.455	24.326	75.964	1.00 87.20	N
ATOM	257	CA	ALA A 340	76.727	25.362	76.943	1.00 84.40	C
ATOM	258	C	ALA A 340	77.497	26.557	76.397	1.00 81.16	C
ATOM	259	O	ALA A 340	77.234	27.697	76.785	1.00 80.26	O
ATOM	260	CB	ALA A 340	77.457	24.787	78.161	1.00 85.04	C
ATOM	261	N	SER A 341	78.452	26.338	75.510	1.00 77.03	N
ATOM	262	CA	SER A 341	79.267	27.403	74.926	1.00 72.02	C
ATOM	263	C	SER A 341	78.435	28.351	74.080	1.00 67.47	C
ATOM	264	O	SER A 341	78.568	29.576	74.162	1.00 63.26	O
ATOM	265	CB	SER A 341	80.428	26.784	74.137	1.00 71.53	C
ATOM	266	OG	SER A 341	80.507	27.178	72.795	1.00 69.57	O
ATOM	267	N	MET A 342	77.581	27.768	73.248	1.00 64.08	N
ATOM	268	CA	MET A 342	76.671	28.553	72.431	1.00 62.01	C
ATOM	269	C	MET A 342	75.663	29.290	73.319	1.00 58.62	C
ATOM	270	O	MET A 342	75.325	30.455	73.098	1.00 56.39	O
ATOM	271	CB	MET A 342	75.893	27.597	71.535	1.00 62.67	C
ATOM	272	CG	MET A 342	74.882	28.258	70.647	1.00 63.17	C
ATOM	273	SD	MET A 342	74.747	27.389	69.098	1.00 70.28	S
ATOM	274	CE	MET A 342	73.064	26.783	69.114	1.00 66.11	C
ATOM	275	N	MET A 343	75.190	28.560	74.346	1.00 52.89	N
ATOM	276	CA	MET A 343	74.213	29.182	75.229	1.00 50.63	C
ATOM	277	C	MET A 343	74.848	30.415	75.855	1.00 49.91	C
ATOM	278	O	MET A 343	74.196	31.460	75.988	1.00 52.56	O

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ATOM	279	CB	MET A 343	73.619	28.255	76.258	1.00	50.93	C
ATOM	280	CG	MET A 343	72.421	27.408	75.889	1.00	53.30	C
ATOM	281	SD	MET A 343	71.438	28.002	74.494	1.00	60.64	S
ATOM	282	CE	MET A 343	70.677	29.482	75.224	1.00	52.97	C
ATOM	283	N	GLY A 344	76.090	30.324	76.252	1.00	46.32	N
ATOM	284	CA	GLY A 344	76.894	31.341	76.853	1.00	40.89	C
ATOM	285	C	GLY A 344	77.069	32.501	75.904	1.00	41.62	C
ATOM	286	O	GLY A 344	76.845	33.648	76.313	1.00	43.99	O
ATOM	287	N	LEU A 345	77.379	32.229	74.635	1.00	40.05	N
ATOM	288	CA	LEU A 345	77.512	33.370	73.724	1.00	39.66	C
ATOM	289	C	LEU A 345	76.152	34.018	73.593	1.00	42.22	C
ATOM	290	O	LEU A 345	75.967	35.236	73.827	1.00	40.01	O
ATOM	291	CB	LEU A 345	78.094	32.904	72.411	1.00	40.52	C
ATOM	292	CG	LEU A 345	79.509	32.281	72.578	1.00	36.81	C
ATOM	293	CD1	LEU A 345	79.728	31.405	71.412	1.00	35.07	C
ATOM	294	CD2	LEU A 345	80.562	33.373	72.617	1.00	35.91	C
ATOM	295	N	LEU A 346	75.135	33.152	73.330	1.00	40.70	N
ATOM	296	CA	LEU A 346	73.799	33.771	73.251	1.00	38.15	C
ATOM	297	C	LEU A 346	73.411	34.515	74.514	1.00	37.81	C
ATOM	298	O	LEU A 346	72.763	35.589	74.387	1.00	33.78	O
ATOM	299	CB	LEU A 346	72.812	32.717	72.775	1.00	36.63	C
ATOM	300	CG	LEU A 346	73.197	32.163	71.396	1.00	36.54	C
ATOM	301	CD1	LEU A 346	72.319	30.952	71.093	1.00	39.38	C
ATOM	302	CD2	LEU A 346	73.117	33.221	70.327	1.00	34.92	C
ATOM	303	N	THR A 347	73.767	34.006	75.697	1.00	35.86	N
ATOM	304	CA	THR A 347	73.329	34.644	76.950	1.00	38.36	C
ATOM	305	C	THR A 347	74.041	35.977	77.122	1.00	39.47	C
ATOM	306	O	THR A 347	73.402	36.976	77.407	1.00	40.21	O
ATOM	307	CB	THR A 347	73.610	33.797	78.194	1.00	38.11	C
ATOM	308	OG1	THR A 347	73.118	32.465	78.023	1.00	43.41	O
ATOM	309	CG2	THR A 347	73.043	34.344	79.455	1.00	32.94	C
ATOM	310	N	ASN A 348	75.364	35.950	76.915	1.00	38.84	N
ATOM	311	CA	ASN A 348	76.138	37.179	77.003	1.00	35.12	C
ATOM	312	C	ASN A 348	75.528	38.199	76.057	1.00	31.75	C
ATOM	313	O	ASN A 348	75.185	39.266	76.531	1.00	32.58	O
ATOM	314	CB	ASN A 348	77.627	36.954	76.674	1.00	39.35	C
ATOM	315	CG	ASN A 348	78.368	38.293	76.687	1.00	43.83	C
ATOM	316	OD1	ASN A 348	78.520	38.958	75.647	1.00	47.22	O
ATOM	317	ND2	ASN A 348	78.692	38.727	77.886	1.00	44.28	N
ATOM	318	N	LEU A 349	75.332	37.861	74.793	1.00	29.26	N
ATOM	319	CA	LEU A 349	74.787	38.795	73.811	1.00	27.91	C
ATOM	320	C	LEU A 349	73.486	39.418	74.289	1.00	31.58	C
ATOM	321	O	LEU A 349	73.345	40.634	74.458	1.00	30.15	O
ATOM	322	CB	LEU A 349	74.719	38.088	72.472	1.00	28.75	C
ATOM	323	CG	LEU A 349	74.083	38.806	71.284	1.00	36.78	C
ATOM	324	CD1	LEU A 349	74.865	40.076	70.945	1.00	36.43	C
ATOM	325	CD2	LEU A 349	74.014	37.922	70.034	1.00	36.80	C
ATOM	326	N	ALA A 350	72.447	38.621	74.572	1.00	32.99	N
ATOM	327	CA	ALA A 350	71.158	39.047	75.016	1.00	32.50	C

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ATOM	328	C	ALA A 350	71.244	40.028	76.184	1.00	34.81	C
ATOM	329	O	ALA A 350	70.514	41.032	76.293	1.00	31.47	O
ATOM	330	CB	ALA A 350	70.422	37.775	75.508	1.00	34.40	C
ATOM	331	N	ASP A 351	72.157	39.696	77.119	1.00	35.11	N
ATOM	332	CA	ASP A 351	72.290	40.545	78.304	1.00	36.10	C
ATOM	333	C	ASP A 351	72.844	41.893	77.939	1.00	35.62	C
ATOM	334	O	ASP A 351	72.436	42.969	78.394	1.00	38.03	O
ATOM	335	CB	ASP A 351	73.103	39.895	79.385	1.00	40.28	C
ATOM	336	CG	ASP A 351	72.367	38.694	79.969	1.00	46.03	C
ATOM	337	OD1	ASP A 351	71.138	38.538	79.792	1.00	45.88	O
ATOM	338	OD2	ASP A 351	73.077	37.876	80.611	1.00	50.85	O
ATOM	339	N	ARG A 352	73.813	41.873	77.039	1.00	34.29	N
ATOM	340	CA	ARG A 352	74.360	43.182	76.651	1.00	30.27	C
ATOM	341	C	ARG A 352	73.280	43.905	75.885	1.00	32.48	C
ATOM	342	O	ARG A 352	73.028	45.094	76.104	1.00	35.69	O
ATOM	343	CB	ARG A 352	75.659	42.934	75.942	1.00	26.80	C
ATOM	344	CG	ARG A 352	76.811	42.549	76.844	1.00	24.91	C
ATOM	345	CD	ARG A 352	78.120	42.621	76.012	1.00	25.30	C
ATOM	346	NE	ARG A 352	78.137	41.367	75.208	1.00	26.30	N
ATOM	347	CZ	ARG A 352	78.241	41.405	73.874	1.00	29.72	C
ATOM	348	NH1	ARG A 352	78.339	42.587	73.220	1.00	25.50	N
ATOM	349	NH2	ARG A 352	78.243	40.195	73.299	1.00	28.11	N
ATOM	350	N	GLU A 353	72.544	43.238	74.999	1.00	33.29	N
ATOM	351	CA	GLU A 353	71.499	43.911	74.219	1.00	31.62	C
ATOM	352	C	GLU A 353	70.418	44.405	75.151	1.00	32.31	C
ATOM	353	O	GLU A 353	69.862	45.515	74.941	1.00	32.80	O
ATOM	354	CB	GLU A 353	70.860	43.063	73.155	1.00	30.74	C
ATOM	355	CG	GLU A 353	71.816	42.499	72.106	1.00	30.48	C
ATOM	356	CD	GLU A 353	70.998	41.652	71.156	1.00	31.15	C
ATOM	357	OE1	GLU A 353	70.769	40.458	71.381	1.00	34.21	O
ATOM	358	OE2	GLU A 353	70.594	42.166	70.133	1.00	31.47	O
ATOM	359	N	LEU A 354	70.152	43.627	76.217	1.00	30.45	N
ATOM	360	CA	LEU A 354	69.120	44.156	77.132	1.00	33.42	C
ATOM	361	C	LEU A 354	69.419	45.557	77.625	1.00	33.94	C
ATOM	362	O	LEU A 354	68.543	46.397	77.897	1.00	35.63	O
ATOM	363	CB	LEU A 354	68.904	43.225	78.282	1.00	35.57	C
ATOM	364	CG	LEU A 354	67.721	43.584	79.202	1.00	36.55	C
ATOM	365	CD1	LEU A 354	66.419	43.322	78.491	1.00	35.51	C
ATOM	366	CD2	LEU A 354	67.862	42.706	80.457	1.00	34.32	C
ATOM	367	N	VAL A 355	70.709	45.904	77.740	1.00	34.11	N
ATOM	368	CA	VAL A 355	71.022	47.248	78.253	1.00	29.81	C
ATOM	369	C	VAL A 355	70.578	48.281	77.275	1.00	32.35	C
ATOM	370	O	VAL A 355	70.082	49.363	77.548	1.00	32.21	O
ATOM	371	CB	VAL A 355	72.503	47.337	78.606	1.00	24.96	C
ATOM	372	CG1	VAL A 355	72.817	48.666	79.308	1.00	25.90	C
ATOM	373	CG2	VAL A 355	72.968	46.208	79.494	1.00	19.23	C
ATOM	374	N	HIS A 356	70.801	48.019	75.969	1.00	35.17	N
ATOM	375	CA	HIS A 356	70.469	49.090	75.019	1.00	34.30	C
ATOM	376	C	HIS A 356	68.976	49.210	74.878	1.00	37.61	C

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ATOM	377	O	HIS A 356	68.470	50.298	74.605	1.00	37.88	O
ATOM	378	CB	HIS A 356	71.119	48.696	73.700	1.00	37.14	C
ATOM	379	CG	HIS A 356	72.604	48.940	73.811	1.00	40.21	C
ATOM	380	ND1	HIS A 356	73.150	50.199	73.687	1.00	40.55	N
ATOM	381	CD2	HIS A 356	73.615	48.091	74.046	1.00	41.21	C
ATOM	382	CE1	HIS A 356	74.457	50.080	73.844	1.00	42.06	C
ATOM	383	NE2	HIS A 356	74.762	48.822	74.038	1.00	41.48	N
ATOM	384	N	MET A 357	68.298	48.067	75.070	1.00	34.83	N
ATOM	385	CA	MET A 357	66.873	48.010	74.942	1.00	34.72	C
ATOM	386	C	MET A 357	66.214	48.979	75.895	1.00	39.56	C
ATOM	387	O	MET A 357	65.178	49.613	75.547	1.00	41.07	O
ATOM	388	CB	MET A 357	66.368	46.576	75.232	1.00	35.23	C
ATOM	389	CG	MET A 357	64.941	46.399	74.752	1.00	32.18	C
ATOM	390	SD	MET A 357	64.275	44.817	75.326	1.00	34.77	S
ATOM	391	CE	MET A 357	65.449	43.688	74.619	1.00	34.80	C
ATOM	392	N	ILE A 358	66.795	49.034	77.102	1.00	38.12	N
ATOM	393	CA	ILE A 358	66.256	49.963	78.081	1.00	40.67	C
ATOM	394	C	ILE A 358	66.347	51.379	77.587	1.00	44.25	C
ATOM	395	O	ILE A 358	65.338	52.129	77.678	1.00	48.55	O
ATOM	396	CB	ILE A 358	66.916	49.765	79.451	1.00	40.93	C
ATOM	397	CG1	ILE A 358	66.228	48.488	80.022	1.00	39.31	C
ATOM	398	CG2	ILE A 358	66.637	50.945	80.347	1.00	39.18	C
ATOM	399	CD1	ILE A 358	67.075	47.683	80.909	1.00	39.58	C
ATOM	400	N	ASN A 359	67.514	51.758	77.039	1.00	40.76	N
ATOM	401	CA	ASN A 359	67.626	53.090	76.513	1.00	40.91	C
ATOM	402	C	ASN A 359	66.563	53.275	75.414	1.00	39.09	C
ATOM	403	O	ASN A 359	66.079	54.381	75.223	1.00	42.57	O
ATOM	404	CB	ASN A 359	68.936	53.472	75.833	1.00	44.08	C
ATOM	405	CG	ASN A 359	70.118	53.378	76.729	1.00	51.07	C
ATOM	406	OD1	ASN A 359	69.922	53.474	77.967	1.00	55.22	O
ATOM	407	ND2	ASN A 359	71.312	53.183	76.144	1.00	50.95	N
ATOM	408	N	TRP A 360	66.430	52.328	74.532	1.00	36.27	N
ATOM	409	CA	TRP A 360	65.485	52.489	73.414	1.00	36.80	C
ATOM	410	C	TRP A 360	64.084	52.609	73.992	1.00	40.32	C
ATOM	411	O	TRP A 360	63.265	53.514	73.773	1.00	37.53	O
ATOM	412	CB	TRP A 360	65.706	51.293	72.489	1.00	32.87	C
ATOM	413	CG	TRP A 360	64.495	51.101	71.623	1.00	36.76	C
ATOM	414	CD1	TRP A 360	64.249	51.724	70.450	1.00	35.10	C
ATOM	415	CD2	TRP A 360	63.406	50.191	71.847	1.00	36.41	C
ATOM	416	NE1	TRP A 360	63.093	51.271	69.921	1.00	35.72	N
ATOM	417	CE2	TRP A 360	62.517	50.381	70.778	1.00	38.84	C
ATOM	418	CE3	TRP A 360	63.083	49.270	72.848	1.00	35.46	C
ATOM	419	CZ2	TRP A 360	61.270	49.707	70.703	1.00	40.31	C
ATOM	420	CZ3	TRP A 360	61.888	48.580	72.776	1.00	35.51	C
ATOM	421	CH2	TRP A 360	61.007	48.822	71.707	1.00	39.13	C
ATOM	422	N	ALA A 361	63.731	51.677	74.909	1.00	40.42	N
ATOM	423	CA	ALA A 361	62.394	51.784	75.480	1.00	43.31	C
ATOM	424	C	ALA A 361	62.074	53.205	75.921	1.00	43.29	C
ATOM	425	O	ALA A 361	60.935	53.682	75.778	1.00	40.16	O

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ATOM	426	CB	ALA A 361	62.223	50.861	76.695	1.00	44.40	C
ATOM	427	N	LYS A 362	63.057	53.829	76.574	1.00	44.67	N
ATOM	428	CA	LYS A 362	62.873	55.140	77.180	1.00	44.02	C
ATOM	429	C	LYS A 362	62.644	56.183	76.120	1.00	44.20	C
ATOM	430	O	LYS A 362	62.172	57.257	76.432	1.00	46.12	O
ATOM	431	CB	LYS A 362	64.028	55.467	78.102	1.00	45.07	C
ATOM	432	CG	LYS A 362	64.099	54.601	79.360	1.00	45.39	C
ATOM	433	CD	LYS A 362	63.760	55.450	80.584	1.00	50.39	C
ATOM	434	CE	LYS A 362	63.073	54.690	81.677	1.00	54.46	C
ATOM	435	NZ	LYS A 362	62.697	55.356	82.942	1.00	53.54	N
ATOM	436	N	ARG A 363	62.896	55.918	74.859	1.00	46.04	N
ATOM	437	CA	ARG A 363	62.666	56.783	73.735	1.00	48.68	C
ATOM	438	C	ARG A 363	61.350	56.466	72.999	1.00	49.08	C
ATOM	439	O	ARG A 363	60.941	57.054	71.977	1.00	48.73	O
ATOM	440	CB	ARG A 363	63.836	56.643	72.757	1.00	53.32	C
ATOM	441	CG	ARG A 363	64.902	57.723	72.904	1.00	60.34	C
ATOM	442	CD	ARG A 363	65.590	57.624	74.196	1.00	67.72	C
ATOM	443	NE	ARG A 363	66.977	58.048	74.319	1.00	76.52	N
ATOM	444	CZ	ARG A 363	67.729	57.640	75.369	1.00	80.50	C
ATOM	445	NH1	ARG A 363	67.200	56.818	76.279	1.00	78.18	N
ATOM	446	NH2	ARG A 363	69.002	58.051	75.459	1.00	84.83	N
ATOM	447	N	VAL A 364	60.623	55.453	73.448	1.00	45.49	N
ATOM	448	CA	VAL A 364	59.402	55.065	72.769	1.00	47.12	C
ATOM	449	C	VAL A 364	58.270	55.938	73.227	1.00	52.70	C
ATOM	450	O	VAL A 364	57.817	55.984	74.385	1.00	55.07	O
ATOM	451	CB	VAL A 364	59.234	53.557	72.909	1.00	43.20	C
ATOM	452	CG1	VAL A 364	58.013	52.972	72.279	1.00	40.68	C
ATOM	453	CG2	VAL A 364	60.476	52.960	72.224	1.00	44.16	C
ATOM	454	N	PRO A 365	57.746	56.755	72.334	1.00	56.52	N
ATOM	455	CA	PRO A 365	56.660	57.676	72.630	1.00	55.71	C
ATOM	456	C	PRO A 365	55.631	57.068	73.527	1.00	57.16	C
ATOM	457	O	PRO A 365	55.000	56.063	73.202	1.00	59.56	O
ATOM	458	CB	PRO A 365	56.078	58.059	71.257	1.00	56.19	C
ATOM	459	CG	PRO A 365	57.446	58.203	70.542	1.00	58.84	C
ATOM	460	CD	PRO A 365	58.160	56.882	70.922	1.00	58.70	C
ATOM	461	N	GLY A 366	55.450	57.650	74.711	1.00	58.05	N
ATOM	462	CA	GLY A 366	54.426	57.130	75.628	1.00	56.39	C
ATOM	463	C	GLY A 366	55.063	56.367	76.771	1.00	56.65	C
ATOM	464	O	GLY A 366	54.553	56.398	77.893	1.00	56.35	O
ATOM	465	N	PHE A 367	56.197	55.701	76.480	1.00	54.46	N
ATOM	466	CA	PHE A 367	56.848	54.870	77.461	1.00	49.74	C
ATOM	467	C	PHE A 367	57.198	55.574	78.738	1.00	49.68	C
ATOM	468	O	PHE A 367	56.884	55.121	79.814	1.00	51.83	O
ATOM	469	CB	PHE A 367	58.152	54.252	76.951	1.00	46.86	C
ATOM	470	CG	PHE A 367	58.531	53.053	77.781	1.00	43.25	C
ATOM	471	CD1	PHE A 367	57.785	51.876	77.698	1.00	42.05	C
ATOM	472	CD2	PHE A 367	59.593	53.110	78.639	1.00	40.49	C
ATOM	473	CE1	PHE A 367	58.186	50.742	78.377	1.00	39.55	C
ATOM	474	CE2	PHE A 367	59.962	51.999	79.388	1.00	41.57	C

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ATOM	475	CZ	PHE A 367	59.241	50.822	79.270	1.00	41.29	C
ATOM	476	N	VAL A 368	57.867	56.700	78.636	1.00	52.26	N
ATOM	477	CA	VAL A 368	58.277	57.398	79.845	1.00	55.10	C
ATOM	478	C	VAL A 368	57.222	58.255	80.487	1.00	57.40	C
ATOM	479	O	VAL A 368	57.476	58.969	81.463	1.00	60.79	O
ATOM	480	CB	VAL A 368	59.634	58.077	79.667	1.00	55.67	C
ATOM	481	CG1	VAL A 368	59.548	59.445	79.052	1.00	54.03	C
ATOM	482	CG2	VAL A 368	60.346	58.041	81.021	1.00	57.90	C
ATOM	483	N	ASP A 369	55.977	58.178	80.074	1.00	59.67	N
ATOM	484	CA	ASP A 369	54.828	58.794	80.705	1.00	60.47	C
ATOM	485	C	ASP A 369	54.346	57.792	81.755	1.00	59.94	C
ATOM	486	O	ASP A 369	53.766	58.144	82.766	1.00	65.43	O
ATOM	487	CB	ASP A 369	53.690	59.040	79.724	1.00	64.16	C
ATOM	488	CG	ASP A 369	54.038	60.056	78.677	1.00	67.29	C
ATOM	489	OD1	ASP A 369	54.913	60.914	78.918	1.00	72.50	O
ATOM	490	OD2	ASP A 369	53.470	60.041	77.578	1.00	70.43	O
ATOM	491	N	LEU A 370	54.608	56.510	81.531	1.00	57.33	N
ATOM	492	CA	LEU A 370	54.194	55.517	82.497	1.00	56.12	C
ATOM	493	C	LEU A 370	55.117	55.633	83.719	1.00	57.05	C
ATOM	494	O	LEU A 370	56.171	56.228	83.643	1.00	58.40	O
ATOM	495	CB	LEU A 370	54.224	54.086	82.012	1.00	53.92	C
ATOM	496	CG	LEU A 370	53.750	53.771	80.597	1.00	51.91	C
ATOM	497	CD1	LEU A 370	54.145	52.344	80.254	1.00	49.81	C
ATOM	498	CD2	LEU A 370	52.260	53.992	80.522	1.00	51.85	C
ATOM	499	N	THR A 371	54.648	55.068	84.805	1.00	57.19	N
ATOM	500	CA	THR A 371	55.305	54.930	86.062	1.00	54.21	C
ATOM	501	C	THR A 371	56.361	53.825	85.887	1.00	56.67	C
ATOM	502	O	THR A 371	56.131	52.858	85.158	1.00	55.41	O
ATOM	503	CB	THR A 371	54.330	54.430	87.151	1.00	52.32	C
ATOM	504	OG1	THR A 371	53.969	53.073	86.858	1.00	51.61	O
ATOM	505	CG2	THR A 371	53.092	55.292	87.182	1.00	52.01	C
ATOM	506	N	LEU A 372	57.455	53.969	86.615	1.00	57.36	N
ATOM	507	CA	LEU A 372	58.566	53.062	86.620	1.00	58.29	C
ATOM	508	C	LEU A 372	58.120	51.623	86.694	1.00	60.17	C
ATOM	509	O	LEU A 372	58.503	50.771	85.878	1.00	63.49	O
ATOM	510	CB	LEU A 372	59.497	53.427	87.759	1.00	57.98	C
ATOM	511	CG	LEU A 372	60.669	52.498	88.043	1.00	59.29	C
ATOM	512	CD1	LEU A 372	61.657	52.449	86.860	1.00	56.28	C
ATOM	513	CD2	LEU A 372	61.371	52.966	89.312	1.00	58.46	C
ATOM	514	N	HIS A 373	57.266	51.300	87.638	1.00	63.16	N
ATOM	515	CA	HIS A 373	56.736	49.927	87.758	1.00	65.55	C
ATOM	516	C	HIS A 373	55.954	49.441	86.539	1.00	57.99	C
ATOM	517	O	HIS A 373	56.039	48.257	86.199	1.00	54.67	O
ATOM	518	CB	HIS A 373	55.946	49.829	89.074	1.00	69.47	C
ATOM	519	CG	AHIS A 373	54.720	49.000	88.987	0.50	73.73	C
ATOM	520	CG	BHIS A 373	56.788	50.250	90.240	0.50	73.05	C
ATOM	521	ND1	AHIS A 373	53.503	49.559	88.628	0.50	76.61	N
ATOM	522	ND1	BHIS A 373	57.746	49.436	90.821	0.50	73.59	N
ATOM	523	CD2	AHIS A 373	54.497	47.674	89.164	0.50	74.74	C

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ATOM	524	CD2BHIS A 373	56.824	51.436	90.897	0.50	73.60	C
ATOM	525	CE1AHIS A 373	52.587	48.602	88.589	0.50	76.98	C
ATOM	526	CE1BHIS A 373	58.323	50.101	91.800	0.50	74.02	C
ATOM	527	NE2AHIS A 373	53.168	47.451	88.911	0.50	75.88	N
ATOM	528	NE2BHIS A 373	57.785	51.306	91.873	0.50	74.59	N
ATOM	529	N ASP A 374	55.238	50.282	85.826	1.00	51.93	N
ATOM	530	CA ASP A 374	54.551	49.869	84.597	1.00	51.38	C
ATOM	531	C ASP A 374	55.515	49.657	83.442	1.00	48.48	C
ATOM	532	O ASP A 374	55.319	48.767	82.638	1.00	44.30	O
ATOM	533	CB ASP A 374	53.450	50.853	84.249	1.00	50.24	C
ATOM	534	CG ASP A 374	52.230	50.420	85.062	1.00	52.68	C
ATOM	535	OD1 ASP A 374	52.218	49.208	85.463	1.00	51.70	O
ATOM	536	OD2 ASP A 374	51.373	51.283	85.253	1.00	53.06	O
ATOM	537	N GLN A 375	56.573	50.488	83.455	1.00	45.36	N
ATOM	538	CA GLN A 375	57.656	50.360	82.495	1.00	41.61	C
ATOM	539	C GLN A 375	58.283	48.993	82.695	1.00	39.41	C
ATOM	540	O GLN A 375	58.336	48.206	81.773	1.00	41.05	O
ATOM	541	CB GLN A 375	58.722	51.381	82.876	1.00	41.76	C
ATOM	542	CG GLN A 375	58.141	52.753	82.526	1.00	45.94	C
ATOM	543	CD GLN A 375	59.172	53.861	82.496	1.00	43.23	C
ATOM	544	OE1 GLN A 375	60.348	53.687	82.769	1.00	43.50	O
ATOM	545	NE2 GLN A 375	58.662	55.017	82.109	1.00	42.26	N
ATOM	546	N VAL A 376	58.641	48.685	83.938	1.00	36.73	N
ATOM	547	CA VAL A 376	59.196	47.368	84.224	1.00	37.97	C
ATOM	548	C VAL A 376	58.282	46.277	83.719	1.00	41.67	C
ATOM	549	O VAL A 376	58.716	45.290	83.122	1.00	45.19	O
ATOM	550	CB VAL A 376	59.469	47.195	85.731	1.00	35.47	C
ATOM	551	CG1 VAL A 376	59.965	45.806	86.083	1.00	30.36	C
ATOM	552	CG2 VAL A 376	60.478	48.183	86.231	1.00	33.53	C
ATOM	553	N HIS A 377	56.969	46.410	83.927	1.00	44.51	N
ATOM	554	CA HIS A 377	56.027	45.407	83.467	1.00	46.78	C
ATOM	555	C HIS A 377	56.050	45.247	81.960	1.00	42.12	C
ATOM	556	O HIS A 377	56.204	44.128	81.478	1.00	40.13	O
ATOM	557	CB HIS A 377	54.614	45.523	84.024	1.00	55.12	C
ATOM	558	CG AHIS A 377	54.584	45.136	85.476	0.50	58.91	C
ATOM	559	CG BHIS A 377	53.722	44.380	83.605	0.50	62.01	C
ATOM	560	ND1AHIS A 377	54.578	46.053	86.503	0.50	62.18	N
ATOM	561	ND1BHIS A 377	52.391	44.275	83.949	0.50	63.95	N
ATOM	562	CD2AHIS A 377	54.630	43.920	86.064	0.50	60.71	C
ATOM	563	CD2BHIS A 377	53.959	43.265	82.854	0.50	65.09	C
ATOM	564	CE1AHIS A 377	54.592	45.421	87.664	0.50	63.07	C
ATOM	565	CE1BHIS A 377	51.870	43.175	83.442	0.50	64.35	C
ATOM	566	NE2AHIS A 377	54.617	44.116	87.425	0.50	62.25	N
ATOM	567	NE2BHIS A 377	52.805	42.538	82.765	0.50	65.59	N
ATOM	568	N LEU A 378	55.875	46.306	81.194	1.00	40.05	N
ATOM	569	CA LEU A 378	56.069	46.198	79.753	1.00	37.29	C
ATOM	570	C LEU A 378	57.391	45.520	79.441	1.00	38.78	C
ATOM	571	O LEU A 378	57.419	44.461	78.742	1.00	36.97	O
ATOM	572	CB LEU A 378	55.891	47.583	79.166	1.00	35.55	C

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ATOM	573	CG	LEU A 378	54.472	48.193	79.308	1.00	35.81	C
ATOM	574	CD1	LEU A 378	54.392	49.470	78.484	1.00	30.30	C
ATOM	575	CD2	LEU A 378	53.362	47.280	78.812	1.00	31.78	C
ATOM	576	N	LEU A 379	58.553	45.941	79.947	1.00	37.44	N
ATOM	577	CA	LEU A 379	59.758	45.222	79.522	1.00	38.20	C
ATOM	578	C	LEU A 379	59.791	43.802	79.976	1.00	37.44	C
ATOM	579	O	LEU A 379	60.111	42.892	79.212	1.00	40.19	O
ATOM	580	CB	LEU A 379	61.058	45.907	79.913	1.00	39.04	C
ATOM	581	CG	LEU A 379	61.325	47.100	79.006	1.00	39.22	C
ATOM	582	CD1	LEU A 379	62.112	48.158	79.710	1.00	42.38	C
ATOM	583	CD2	LEU A 379	62.004	46.589	77.765	1.00	41.99	C
ATOM	584	N	GLU A 380	59.450	43.551	81.214	1.00	40.36	N
ATOM	585	CA	GLU A 380	59.453	42.181	81.682	1.00	41.72	C
ATOM	586	C	GLU A 380	58.810	41.256	80.662	1.00	43.73	C
ATOM	587	O	GLU A 380	59.412	40.219	80.382	1.00	44.30	O
ATOM	588	CB	GLU A 380	58.749	42.072	83.019	1.00	44.70	C
ATOM	589	CG	GLU A 380	59.462	40.967	83.836	1.00	54.40	C
ATOM	590	CD	GLU A 380	58.603	40.469	84.968	1.00	59.95	C
ATOM	591	OE1	GLU A 380	57.640	41.190	85.359	1.00	64.57	O
ATOM	592	OE2	GLU A 380	58.858	39.364	85.491	1.00	62.18	O
ATOM	593	N	CYS A 381	57.620	41.585	80.171	1.00	40.13	N
ATOM	594	CA	CYS A 381	56.913	40.781	79.214	1.00	43.11	C
ATOM	595	C	CYS A 381	57.398	40.814	77.770	1.00	41.34	C
ATOM	596	O	CYS A 381	57.371	39.795	77.080	1.00	37.54	O
ATOM	597	CB	CYS A 381	55.444	41.227	79.248	1.00	51.91	C
ATOM	598	SG	ACYS A 381	54.415	40.723	80.635	0.50	58.51	S
ATOM	599	SG	BCYS A 381	54.457	40.510	80.604	0.50	56.75	S
ATOM	600	N	ALA A 382	57.838	41.858	77.157	1.00	38.84	N
ATOM	601	CA	ALA A 382	58.257	42.011	75.817	1.00	40.08	C
ATOM	602	C	ALA A 382	59.715	41.782	75.473	1.00	40.25	C
ATOM	603	O	ALA A 382	59.985	41.601	74.285	1.00	38.99	O
ATOM	604	CB	ALA A 382	58.042	43.529	75.430	1.00	39.43	C
ATOM	605	N	TRP A 383	60.614	41.752	76.463	1.00	39.37	N
ATOM	606	CA	TRP A 383	62.029	41.668	76.112	1.00	34.09	C
ATOM	607	C	TRP A 383	62.359	40.622	75.103	1.00	31.78	C
ATOM	608	O	TRP A 383	63.015	40.905	74.096	1.00	32.20	O
ATOM	609	CB	TRP A 383	62.859	41.672	77.383	1.00	35.92	C
ATOM	610	CG	TRP A 383	62.819	40.332	78.083	1.00	36.18	C
ATOM	611	CD1	TRP A 383	61.988	39.877	79.045	1.00	33.74	C
ATOM	612	CD2	TRP A 383	63.738	39.252	77.793	1.00	32.73	C
ATOM	613	NE1	TRP A 383	62.314	38.588	79.374	1.00	31.23	N
ATOM	614	CE2	TRP A 383	63.379	38.189	78.617	1.00	31.78	C
ATOM	615	CE3	TRP A 383	64.791	39.129	76.910	1.00	33.23	C
ATOM	616	CZ2	TRP A 383	64.065	36.985	78.590	1.00	34.54	C
ATOM	617	CZ3	TRP A 383	65.487	37.948	76.872	1.00	37.35	C
ATOM	618	CH2	TRP A 383	65.114	36.888	77.709	1.00	39.46	C
ATOM	619	N	LEU A 384	61.904	39.399	75.220	1.00	32.57	N
ATOM	620	CA	LEU A 384	62.253	38.338	74.291	1.00	31.20	C
ATOM	621	C	LEU A 384	61.644	38.543	72.923	1.00	33.24	C

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ATOM	622	O	LEU A 384	62.338	38.321	71.921	1.00	36.36	O
ATOM	623	CB	LEU A 384	61.901	36.984	74.846	1.00	30.65	C
ATOM	624	CG	LEU A 384	62.520	35.799	74.124	1.00	34.98	C
ATOM	625	CD1	LEU A 384	64.011	35.983	73.843	1.00	36.19	C
ATOM	626	CD2	LEU A 384	62.277	34.525	74.920	1.00	33.80	C
ATOM	627	N	GLU A 385	60.426	39.016	72.851	1.00	31.93	N
ATOM	628	CA	GLU A 385	59.761	39.353	71.602	1.00	33.94	C
ATOM	629	C	GLU A 385	60.602	40.397	70.858	1.00	32.22	C
ATOM	630	O	GLU A 385	60.817	40.376	69.660	1.00	33.72	O
ATOM	631	CB	GLU A 385	58.370	39.960	71.823	1.00	35.67	C
ATOM	632	CG	GLU A 385	57.399	39.108	72.631	1.00	38.33	C
ATOM	633	CD	GLU A 385	55.994	39.641	72.528	1.00	40.58	C
ATOM	634	OE1	GLU A 385	55.547	39.798	71.400	1.00	40.46	O
ATOM	635	OE2	GLU A 385	55.290	39.935	73.508	1.00	46.27	O
ATOM	636	N	ILE A 386	61.074	41.363	71.631	1.00	33.24	N
ATOM	637	CA	ILE A 386	61.890	42.428	71.095	1.00	34.08	C
ATOM	638	C	ILE A 386	63.252	41.946	70.640	1.00	32.42	C
ATOM	639	O	ILE A 386	63.662	42.262	69.535	1.00	30.26	O
ATOM	640	CB	ILE A 386	61.988	43.548	72.115	1.00	36.86	C
ATOM	641	CG1	ILE A 386	60.540	44.052	72.312	1.00	34.58	C
ATOM	642	CG2	ILE A 386	62.928	44.623	71.558	1.00	34.85	C
ATOM	643	CD1	ILE A 386	60.405	45.082	73.399	1.00	35.95	C
ATOM	644	N	LEU A 387	63.928	41.081	71.387	1.00	28.96	N
ATOM	645	CA	LEU A 387	65.174	40.562	70.881	1.00	29.61	C
ATOM	646	C	LEU A 387	64.858	39.779	69.603	1.00	32.09	C
ATOM	647	O	LEU A 387	65.705	39.742	68.698	1.00	34.46	O
ATOM	648	CB	LEU A 387	65.889	39.569	71.835	1.00	27.75	C
ATOM	649	CG	LEU A 387	66.424	40.175	73.143	1.00	26.77	C
ATOM	650	CD1	LEU A 387	67.288	39.131	73.866	1.00	23.67	C
ATOM	651	CD2	LEU A 387	67.178	41.469	72.900	1.00	20.60	C
ATOM	652	N	MET A 388	63.715	39.109	69.599	1.00	31.37	N
ATOM	653	CA	MET A 388	63.407	38.271	68.455	1.00	32.11	C
ATOM	654	C	MET A 388	63.050	39.074	67.251	1.00	34.52	C
ATOM	655	O	MET A 388	63.618	38.897	66.152	1.00	39.16	O
ATOM	656	CB	MET A 388	62.369	37.292	68.899	1.00	35.14	C
ATOM	657	CG	MET A 388	62.997	36.132	69.696	1.00	34.54	C
ATOM	658	SD	MET A 388	61.579	35.037	70.144	1.00	31.08	S
ATOM	659	CE	MET A 388	62.630	33.726	70.818	1.00	28.15	C
ATOM	660	N	ILE A 389	62.163	40.064	67.378	1.00	31.76	N
ATOM	661	CA	ILE A 389	61.937	40.845	66.157	1.00	28.08	C
ATOM	662	C	ILE A 389	63.220	41.450	65.674	1.00	27.99	C
ATOM	663	O	ILE A 389	63.340	41.443	64.445	1.00	33.28	O
ATOM	664	CB	ILE A 389	60.741	41.789	66.277	1.00	29.02	C
ATOM	665	CG1	ILE A 389	60.019	41.955	64.912	1.00	24.45	C
ATOM	666	CG2	ILE A 389	61.094	43.043	67.005	1.00	24.35	C
ATOM	667	CD1	ILE A 389	59.099	43.122	64.867	1.00	25.54	C
ATOM	668	N	GLY A 390	64.202	41.873	66.409	1.00	31.34	N
ATOM	669	CA	GLY A 390	65.489	42.435	65.959	1.00	32.81	C
ATOM	670	C	GLY A 390	66.289	41.365	65.202	1.00	37.06	C

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ATOM	671	O	GLY A 390	66.893	41.578	64.121	1.00	34.61	O
ATOM	672	N	LEU A 391	66.214	40.147	65.760	1.00	36.24	N
ATOM	673	CA	LEU A 391	66.917	39.020	65.149	1.00	37.58	C
ATOM	674	C	LEU A 391	66.366	38.746	63.762	1.00	38.13	C
ATOM	675	O	LEU A 391	66.998	38.644	62.734	1.00	41.32	O
ATOM	676	CB	LEU A 391	66.696	37.733	65.989	1.00	34.64	C
ATOM	677	CG	LEU A 391	67.358	36.473	65.437	1.00	34.89	C
ATOM	678	CD1	LEU A 391	68.884	36.663	65.425	1.00	32.05	C
ATOM	679	CD2	LEU A 391	67.013	35.204	66.176	1.00	30.69	C
ATOM	680	N	VAL A 392	65.052	38.598	63.715	1.00	37.28	N
ATOM	681	CA	VAL A 392	64.396	38.272	62.452	1.00	35.17	C
ATOM	682	C	VAL A 392	64.699	39.339	61.446	1.00	36.85	C
ATOM	683	O	VAL A 392	65.135	39.107	60.309	1.00	35.69	O
ATOM	684	CB	VAL A 392	62.905	38.051	62.725	1.00	31.86	C
ATOM	685	CG1	VAL A 392	62.145	38.115	61.450	1.00	33.20	C
ATOM	686	CG2	VAL A 392	62.744	36.672	63.376	1.00	29.17	C
ATOM	687	N	TRP A 393	64.502	40.589	61.879	1.00	38.90	N
ATOM	688	CA	TRP A 393	64.798	41.685	60.919	1.00	40.63	C
ATOM	689	C	TRP A 393	66.238	41.713	60.430	1.00	41.64	C
ATOM	690	O	TRP A 393	66.577	41.830	59.234	1.00	42.66	O
ATOM	691	CB	TRP A 393	64.334	42.968	61.524	1.00	36.63	C
ATOM	692	CG	TRP A 393	64.978	44.145	60.878	1.00	41.40	C
ATOM	693	CD1	TRP A 393	66.133	44.745	61.230	1.00	42.92	C
ATOM	694	CD2	TRP A 393	64.442	44.911	59.802	1.00	44.52	C
ATOM	695	NE1	TRP A 393	66.348	45.849	60.435	1.00	43.05	N
ATOM	696	CE2	TRP A 393	65.340	45.971	59.552	1.00	44.85	C
ATOM	697	CE3	TRP A 393	63.273	44.834	59.038	1.00	46.64	C
ATOM	698	CZ2	TRP A 393	65.125	46.909	58.530	1.00	47.52	C
ATOM	699	CZ3	TRP A 393	63.050	45.763	58.042	1.00	46.72	C
ATOM	700	CH2	TRP A 393	63.976	46.788	57.787	1.00	46.56	C
ATOM	701	N	ARG A 394	67.241	41.531	61.306	1.00	41.14	N
ATOM	702	CA	ARG A 394	68.609	41.594	60.787	1.00	38.26	C
ATOM	703	C	ARG A 394	69.005	40.350	60.060	1.00	40.13	C
ATOM	704	O	ARG A 394	70.050	40.371	59.402	1.00	44.10	O
ATOM	705	CB	ARG A 394	69.669	42.039	61.742	1.00	36.59	C
ATOM	706	CG	ARG A 394	70.204	41.076	62.746	1.00	34.20	C
ATOM	707	CD	ARG A 394	70.465	41.819	64.103	1.00	28.97	C
ATOM	708	NE	ARG A 394	70.926	40.678	65.024	1.00	28.34	N
ATOM	709	CZ	ARG A 394	70.320	40.727	66.245	1.00	27.62	C
ATOM	710	NH1	ARG A 394	69.464	41.713	66.453	1.00	19.82	N
ATOM	711	NH2	ARG A 394	70.587	39.885	67.213	1.00	25.67	N
ATOM	712	N	SER A 395	68.208	39.318	60.111	1.00	41.76	N
ATOM	713	CA	SER A 395	68.452	38.051	59.429	1.00	38.35	C
ATOM	714	C	SER A 395	67.806	38.064	58.044	1.00	42.96	C
ATOM	715	O	SER A 395	68.042	37.142	57.249	1.00	43.79	O
ATOM	716	CB	SER A 395	67.787	36.988	60.304	1.00	33.00	C
ATOM	717	OG	SER A 395	68.581	36.712	61.393	1.00	32.59	O
ATOM	718	N	MET A 396	66.920	39.018	57.733	1.00	46.08	N
ATOM	719	CA	MET A 396	66.241	39.028	56.474	1.00	52.16	C

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ATOM	720	C	MET A 396	67.080	38.719	55.245	1.00	55.78	C
ATOM	721	O	MET A 396	66.630	38.021	54.347	1.00	58.39	O
ATOM	722	CB	MET A 396	65.692	40.431	56.132	1.00	52.31	C
ATOM	723	CG	MET A 396	64.582	40.764	57.105	1.00	56.91	C
ATOM	724	SD	MET A 396	63.629	42.054	56.328	1.00	63.07	S
ATOM	725	CE	MET A 396	64.823	43.416	56.452	1.00	64.89	C
ATOM	726	N	GLU A 397	68.248	39.308	55.134	1.00	60.31	N
ATOM	727	CA	GLU A 397	69.084	39.092	53.953	1.00	64.28	C
ATOM	728	C	GLU A 397	70.057	37.952	54.074	1.00	65.23	C
ATOM	729	O	GLU A 397	71.096	37.919	53.392	1.00	67.51	O
ATOM	730	CB	GLU A 397	69.836	40.417	53.676	1.00	63.51	C
ATOM	731	CG	GLU A 397	68.932	41.412	52.969	1.00	63.47	C
ATOM	735	N	HIS A 398	69.810	36.962	54.918	1.00	62.92	N
ATOM	736	CA	HIS A 398	70.655	35.813	55.141	1.00	61.99	C
ATOM	737	C	HIS A 398	69.769	34.568	55.190	1.00	63.69	C
ATOM	738	O	HIS A 398	69.650	33.874	56.210	1.00	64.15	O
ATOM	739	CB	HIS A 398	71.494	35.908	56.435	1.00	60.76	C
ATOM	740	CG	HIS A 398	72.350	37.130	56.441	1.00	62.00	C
ATOM	741	ND1	HIS A 398	73.602	37.138	55.871	1.00	62.89	N
ATOM	742	CD2	HIS A 398	72.159	38.382	56.907	1.00	63.78	C
ATOM	743	CE1	HIS A 398	74.136	38.343	55.996	1.00	63.12	C
ATOM	744	NE2	HIS A 398	73.287	39.130	56.626	1.00	63.82	N
ATOM	745	N	PRO A 399	69.118	34.298	54.072	1.00	64.36	N
ATOM	746	CA	PRO A 399	68.245	33.161	53.880	1.00	63.44	C
ATOM	747	C	PRO A 399	68.777	31.873	54.445	1.00	62.06	C
ATOM	748	O	PRO A 399	69.878	31.459	54.055	1.00	66.41	O
ATOM	749	CB	PRO A 399	68.065	32.967	52.358	1.00	66.29	C
ATOM	750	CG	PRO A 399	68.811	34.124	51.755	1.00	67.27	C
ATOM	751	CD	PRO A 399	69.294	35.045	52.821	1.00	65.41	C
ATOM	752	N	GLY A 400	68.081	31.209	55.340	1.00	59.48	N
ATOM	753	CA	GLY A 400	68.581	29.943	55.883	1.00	58.66	C
ATOM	754	C	GLY A 400	69.420	30.084	57.129	1.00	59.22	C
ATOM	755	O	GLY A 400	69.649	29.125	57.892	1.00	57.75	O
ATOM	756	N	LYS A 401	69.779	31.333	57.419	1.00	60.49	N
ATOM	757	CA	LYS A 401	70.647	31.575	58.580	1.00	61.65	C
ATOM	758	C	LYS A 401	70.064	32.683	59.437	1.00	59.45	C
ATOM	759	O	LYS A 401	69.238	33.473	58.937	1.00	60.63	O
ATOM	760	CB	LYS A 401	71.995	31.976	57.973	1.00	67.13	C
ATOM	761	CG	LYS A 401	72.926	30.812	57.630	1.00	72.43	C
ATOM	762	CD	LYS A 401	74.002	31.223	56.630	1.00	75.81	C
ATOM	763	CE	LYS A 401	74.975	30.083	56.376	1.00	78.81	C
ATOM	764	NZ	LYS A 401	76.395	30.528	56.184	1.00	80.22	N
ATOM	765	N	LEU A 402	70.423	32.708	60.711	1.00	52.61	N
ATOM	766	CA	LEU A 402	70.066	33.765	61.639	1.00	45.10	C
ATOM	767	C	LEU A 402	71.344	34.513	62.075	1.00	43.73	C
ATOM	768	O	LEU A 402	72.298	33.996	62.654	1.00	39.37	O
ATOM	769	CB	LEU A 402	69.399	33.237	62.909	1.00	42.38	C
ATOM	770	CG	LEU A 402	68.120	32.435	62.728	1.00	39.82	C
ATOM	771	CD1	LEU A 402	67.769	31.650	63.986	1.00	39.53	C

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ATOM	772	CD2 LEU A 402	66.993	33.374	62.319	1.00	39.35	C
ATOM	773	N LEU A 403	71.300	35.810	61.904	1.00	42.24	N
ATOM	774	CA LEU A 403	72.268	36.780	62.299	1.00	40.59	C
ATOM	775	C LEU A 403	72.049	37.247	63.735	1.00	41.66	C
ATOM	776	O LEU A 403	71.713	38.394	64.144	1.00	41.67	O
ATOM	777	CB LEU A 403	72.238	37.958	61.311	1.00	42.13	C
ATOM	778	CG LEU A 403	73.447	38.895	61.429	1.00	46.14	C
ATOM	779	CD1 LEU A 403	74.639	38.172	60.823	1.00	49.15	C
ATOM	780	CD2 LEU A 403	73.227	40.203	60.714	1.00	49.49	C
ATOM	781	N PHE A 404	72.408	36.321	64.654	1.00	40.36	N
ATOM	782	CA PHE A 404	72.406	36.715	66.070	1.00	41.94	C
ATOM	783	C PHE A 404	73.318	37.929	66.247	1.00	41.94	C
ATOM	784	O PHE A 404	72.974	38.820	66.991	1.00	42.90	O
ATOM	785	CB PHE A 404	72.843	35.598	66.931	1.00	42.78	C
ATOM	786	CG PHE A 404	71.768	34.592	67.146	1.00	43.78	C
ATOM	787	CD1 PHE A 404	70.810	34.769	68.112	1.00	44.40	C
ATOM	788	CD2 PHE A 404	71.748	33.445	66.381	1.00	46.28	C
ATOM	789	CE1 PHE A 404	69.841	33.791	68.313	1.00	43.91	C
ATOM	790	CE2 PHE A 404	70.771	32.465	66.574	1.00	44.73	C
ATOM	791	CZ PHE A 404	69.833	32.653	67.543	1.00	43.94	C
ATOM	792	N ALA A 405	74.436	37.946	65.571	1.00	42.52	N
ATOM	793	CA ALA A 405	75.370	39.061	65.568	1.00	42.15	C
ATOM	794	C ALA A 405	76.167	38.912	64.249	1.00	43.61	C
ATOM	795	O ALA A 405	76.106	37.832	63.651	1.00	45.81	O
ATOM	796	CB ALA A 405	76.301	39.170	66.715	1.00	39.38	C
ATOM	797	N PRO A 406	76.861	39.956	63.875	1.00	40.72	N
ATOM	798	CA PRO A 406	77.624	39.995	62.645	1.00	40.43	C
ATOM	799	C PRO A 406	78.662	38.899	62.665	1.00	44.15	C
ATOM	800	O PRO A 406	78.908	38.153	61.706	1.00	46.52	O
ATOM	801	CB PRO A 406	78.192	41.408	62.548	1.00	39.43	C
ATOM	802	CG PRO A 406	77.309	42.186	63.509	1.00	38.57	C
ATOM	803	CD PRO A 406	76.899	41.234	64.592	1.00	38.37	C
ATOM	804	N ASN A 407	79.299	38.719	63.824	1.00	45.92	N
ATOM	805	CA ASN A 407	80.292	37.685	63.991	1.00	47.14	C
ATOM	806	C ASN A 407	79.688	36.384	64.518	1.00	47.74	C
ATOM	807	O ASN A 407	80.540	35.607	64.997	1.00	49.51	O
ATOM	808	CB ASN A 407	81.401	38.056	64.970	1.00	49.67	C
ATOM	809	CG ASN A 407	80.967	38.449	66.364	1.00	48.87	C
ATOM	810	OD1 ASN A 407	79.848	38.858	66.629	1.00	47.25	O
ATOM	811	ND2 ASN A 407	81.904	38.361	67.311	1.00	46.89	N
ATOM	812	N LEU A 408	78.395	36.163	64.444	1.00	43.98	N
ATOM	813	CA LEU A 408	77.840	34.907	64.942	1.00	44.28	C
ATOM	814	C LEU A 408	76.574	34.578	64.137	1.00	48.56	C
ATOM	815	O LEU A 408	75.483	34.720	64.657	1.00	50.61	O
ATOM	816	CB LEU A 408	77.399	35.004	66.412	1.00	41.78	C
ATOM	817	CG LEU A 408	76.965	33.709	67.060	1.00	37.59	C
ATOM	818	CD1 LEU A 408	77.962	32.592	66.735	1.00	42.03	C
ATOM	819	CD2 LEU A 408	76.774	33.777	68.536	1.00	37.24	C
ATOM	820	N LEU A 409	76.739	34.248	62.895	1.00	50.15	N

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ATOM	821	CA	LEU A 409	75.691	33.915	61.969	1.00	53.65	C
ATOM	822	C	LEU A 409	75.440	32.418	61.915	1.00	55.29	C
ATOM	823	O	LEU A 409	76.158	31.729	61.190	1.00	59.32	O
ATOM	824	CB	LEU A 409	76.154	34.481	60.614	1.00	52.50	C
ATOM	825	CG	LEU A 409	75.026	34.637	59.601	1.00	54.30	C
ATOM	826	CD1	LEU A 409	75.459	35.371	58.345	1.00	54.05	C
ATOM	827	CD2	LEU A 409	74.550	33.227	59.271	1.00	53.81	C
ATOM	828	N	LEU A 410	74.481	31.871	62.624	1.00	55.42	N
ATOM	829	CA	LEU A 410	74.215	30.453	62.637	1.00	58.30	C
ATOM	830	C	LEU A 410	73.123	29.988	61.713	1.00	61.42	C
ATOM	831	O	LEU A 410	72.240	30.726	61.277	1.00	62.98	O
ATOM	832	CB	LEU A 410	73.896	30.029	64.080	1.00	60.54	C
ATOM	833	CG	LEU A 410	74.877	30.535	65.147	1.00	61.88	C
ATOM	834	CD1	LEU A 410	74.560	30.031	66.548	1.00	60.79	C
ATOM	835	CD2	LEU A 410	76.283	30.133	64.745	1.00	62.85	C
ATOM	836	N	ASP A 411	73.124	28.703	61.379	1.00	64.97	N
ATOM	837	CA	ASP A 411	72.121	28.133	60.480	1.00	68.11	C
ATOM	838	C	ASP A 411	71.349	27.042	61.208	1.00	70.80	C
ATOM	839	O	ASP A 411	71.717	26.692	62.323	1.00	68.64	O
ATOM	840	CB	ASP A 411	72.772	27.554	59.224	1.00	66.57	C
ATOM	841	CG	ASP A 411	73.750	26.453	59.578	1.00	67.45	C
ATOM	842	OD1	ASP A 411	73.421	25.590	60.428	1.00	67.96	O
ATOM	843	OD2	ASP A 411	74.874	26.446	59.021	1.00	67.41	O
ATOM	844	N	ARG A 412	70.306	26.527	60.583	1.00	78.02	N
ATOM	845	CA	ARG A 412	69.449	25.494	61.180	1.00	83.69	C
ATOM	846	C	ARG A 412	70.221	24.459	61.971	1.00	83.75	C
ATOM	847	O	ARG A 412	69.998	24.217	63.162	1.00	81.46	O
ATOM	848	CB	ARG A 412	68.604	24.859	60.063	1.00	88.30	C
ATOM	849	CG	ARG A 412	67.453	23.982	60.525	1.00	95.09	C
ATOM	850	CD	ARG A 412	67.522	22.612	59.901	1.00	101.21	C
ATOM	851	NE	ARG A 412	67.033	21.492	60.685	1.00	106.04	N
ATOM	852	CZ	ARG A 412	67.081	20.221	60.269	1.00	109.24	C
ATOM	853	NH1	ARG A 412	67.593	19.906	59.082	1.00	110.96	N
ATOM	854	NH2	ARG A 412	66.610	19.256	61.058	1.00	110.83	N
ATOM	855	N	ASN A 413	71.187	23.790	61.345	1.00	86.77	N
ATOM	856	CA	ASN A 413	71.997	22.750	61.947	1.00	88.40	C
ATOM	857	C	ASN A 413	72.726	23.186	63.197	1.00	86.70	C
ATOM	858	O	ASN A 413	72.770	22.446	64.194	1.00	84.78	O
ATOM	859	CB	ASN A 413	73.003	22.181	60.930	1.00	94.30	C
ATOM	860	CG	ASN A 413	73.815	21.042	61.513	1.00	98.85	C
ATOM	861	OD1	ASN A 413	73.568	20.563	62.622	1.00	102.19	O
ATOM	862	ND2	ASN A 413	74.833	20.518	60.837	1.00	101.25	N
ATOM	863	N	GLN A 414	73.361	24.370	63.167	1.00	85.09	N
ATOM	864	CA	GLN A 414	73.997	24.886	64.392	1.00	82.79	C
ATOM	865	C	GLN A 414	72.984	25.035	65.518	1.00	81.33	C
ATOM	866	O	GLN A 414	73.180	24.679	66.682	1.00	79.48	O
ATOM	867	CB	GLN A 414	74.664	26.220	64.092	1.00	81.91	C
ATOM	868	CG	GLN A 414	76.063	26.114	63.538	1.00	82.77	C
ATOM	869	CD	GLN A 414	76.431	27.257	62.620	1.00	84.68	C

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ATOM	870	OE1 GLN A 414	75.687	27.652	61.712	1.00	85.74	O
ATOM	871	NE2 GLN A 414	77.608	27.859	62.821	1.00	85.01	N
ATOM	872	N GLY A 415	71.781	25.527	65.216	1.00	80.63	N
ATOM	873	CA GLY A 415	70.742	25.696	66.201	1.00	83.40	C
ATOM	874	C GLY A 415	70.340	24.445	66.944	1.00	83.82	C
ATOM	875	O GLY A 415	69.712	24.503	68.003	1.00	84.09	O
ATOM	876	N LYS A 416	70.653	23.278	66.432	1.00	86.07	N
ATOM	877	CA LYS A 416	70.358	21.991	67.041	1.00	88.46	C
ATOM	878	C LYS A 416	71.346	21.617	68.133	1.00	90.69	C
ATOM	879	O LYS A 416	71.114	20.736	68.976	1.00	90.97	O
ATOM	880	CB LYS A 416	70.292	20.922	65.936	1.00	86.72	C
ATOM	885	N CYS A 417	72.472	22.326	68.256	1.00	92.64	N
ATOM	886	CA CYS A 417	73.483	22.108	69.272	1.00	93.07	C
ATOM	887	C CYS A 417	72.909	22.354	70.666	1.00	93.38	C
ATOM	888	O CYS A 417	73.434	21.863	71.658	1.00	92.91	O
ATOM	889	CB CYS A 417	74.701	22.998	69.048	1.00	94.33	C
ATOM	890	SG CYS A 417	75.678	22.635	67.566	1.00	99.02	S
ATOM	891	N VAL A 418	71.834	23.132	70.752	1.00	93.78	N
ATOM	892	CA VAL A 418	71.120	23.402	71.968	1.00	93.62	C
ATOM	893	C VAL A 418	69.808	22.596	72.013	1.00	93.64	C
ATOM	894	O VAL A 418	69.181	22.351	70.999	1.00	91.80	O
ATOM	895	CB VAL A 418	70.736	24.892	72.107	1.00	93.31	C
ATOM	896	CG1 VAL A 418	70.086	25.187	73.456	1.00	91.67	C
ATOM	897	CG2 VAL A 418	71.979	25.742	71.931	1.00	94.17	C
ATOM	898	N GLU A 419	69.412	22.265	73.215	1.00	95.05	N
ATOM	899	CA GLU A 419	68.188	21.657	73.643	1.00	95.54	C
ATOM	900	C GLU A 419	66.973	22.239	72.923	1.00	95.38	C
ATOM	901	O GLU A 419	66.476	23.327	73.242	1.00	95.98	O
ATOM	902	CB GLU A 419	67.991	21.962	75.166	1.00	95.46	C
ATOM	907	N GLY A 420	66.498	21.521	71.918	1.00	94.14	N
ATOM	908	CA GLY A 420	65.357	21.884	71.143	1.00	92.12	C
ATOM	909	C GLY A 420	65.092	23.320	70.781	1.00	89.03	C
ATOM	910	O GLY A 420	64.020	23.850	71.107	1.00	88.17	O
ATOM	911	N MET A 421	66.033	23.982	70.089	1.00	86.43	N
ATOM	912	CA MET A 421	65.784	25.373	69.683	1.00	82.99	C
ATOM	913	C MET A 421	65.464	25.306	68.175	1.00	80.42	C
ATOM	914	O MET A 421	64.989	26.266	67.583	1.00	80.10	O
ATOM	915	CB MET A 421	66.764	26.427	70.019	1.00	81.48	C
ATOM	916	CG MET A 421	68.244	26.357	69.911	1.00	79.85	C
ATOM	917	SD MET A 421	69.040	27.989	69.709	1.00	77.79	S
ATOM	918	CE MET A 421	68.655	28.724	71.288	1.00	79.07	C
ATOM	919	N VAL A 422	65.609	24.092	67.625	1.00	76.08	N
ATOM	920	CA VAL A 422	65.334	23.826	66.229	1.00	71.68	C
ATOM	921	C VAL A 422	63.966	24.412	65.856	1.00	67.41	C
ATOM	922	O VAL A 422	63.776	25.123	64.899	1.00	67.37	O
ATOM	923	CB VAL A 422	65.173	22.322	65.867	1.00	72.40	C
ATOM	924	CG1 VAL A 422	65.967	22.025	64.609	1.00	71.96	C
ATOM	925	CG2 VAL A 422	65.512	21.394	67.006	1.00	73.60	C
ATOM	926	N GLU A 423	63.017	24.009	66.669	1.00	64.30	N

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ATOM	927	CA	GLU A 423	61.623	24.390	66.564	1.00	62.34	C
ATOM	928	C	GLU A 423	61.457	25.875	66.421	1.00	56.63	C
ATOM	929	O	GLU A 423	60.835	26.342	65.468	1.00	54.37	O
ATOM	930	CB	GLU A 423	60.987	23.849	67.865	1.00	68.72	C
ATOM	931	CG	GLU A 423	61.513	22.419	68.085	1.00	76.48	C
ATOM	932	CD	GLU A 423	61.053	21.478	66.981	1.00	83.18	C
ATOM	933	OE1	GLU A 423	61.030	21.792	65.757	1.00	84.19	O
ATOM	934	OE2	GLU A 423	60.693	20.332	67.375	1.00	87.12	O
ATOM	935	N	ILE A 424	62.064	26.591	67.362	1.00	50.66	N
ATOM	936	CA	ILE A 424	62.014	28.050	67.353	1.00	49.94	C
ATOM	937	C	ILE A 424	62.833	28.671	66.258	1.00	49.72	C
ATOM	938	O	ILE A 424	62.454	29.564	65.483	1.00	47.07	O
ATOM	939	CB	ILE A 424	62.365	28.585	68.734	1.00	49.44	C
ATOM	940	CG1	ILE A 424	61.957	27.488	69.748	1.00	47.25	C
ATOM	941	CG2	ILE A 424	61.546	29.853	68.939	1.00	52.10	C
ATOM	942	CD1	ILE A 424	61.539	28.004	71.086	1.00	46.42	C
ATOM	943	N	PHE A 425	64.032	28.110	66.119	1.00	48.71	N
ATOM	944	CA	PHE A 425	64.956	28.558	65.078	1.00	48.83	C
ATOM	945	C	PHE A 425	64.259	28.554	63.730	1.00	49.83	C
ATOM	946	O	PHE A 425	64.333	29.486	62.912	1.00	49.75	O
ATOM	947	CB	PHE A 425	66.079	27.557	65.115	1.00	52.26	C
ATOM	948	CG	PHE A 425	67.384	28.056	64.616	1.00	54.82	C
ATOM	949	CD1	PHE A 425	67.534	28.250	63.249	1.00	55.00	C
ATOM	950	CD2	PHE A 425	68.429	28.309	65.493	1.00	54.48	C
ATOM	951	CE1	PHE A 425	68.734	28.713	62.751	1.00	54.74	C
ATOM	952	CE2	PHE A 425	69.630	28.763	64.995	1.00	54.33	C
ATOM	953	CZ	PHE A 425	69.769	28.957	63.628	1.00	55.26	C
ATOM	954	N	ASP A 426	63.592	27.439	63.451	1.00	50.34	N
ATOM	955	CA	ASP A 426	62.830	27.302	62.211	1.00	52.02	C
ATOM	956	C	ASP A 426	61.741	28.379	62.154	1.00	47.88	C
ATOM	957	O	ASP A 426	61.620	29.141	61.192	1.00	45.05	O
ATOM	958	CB	ASP A 426	62.232	25.927	62.120	1.00	58.40	C
ATOM	959	CG	ASP A 426	63.114	24.758	61.823	1.00	62.55	C
ATOM	960	OD1	ASP A 426	64.022	24.861	60.962	1.00	65.48	O
ATOM	961	OD2	ASP A 426	62.888	23.686	62.458	1.00	64.32	O
ATOM	962	N	MET A 427	60.978	28.491	63.257	1.00	43.98	N
ATOM	963	CA	MET A 427	59.955	29.540	63.285	1.00	41.42	C
ATOM	964	C	MET A 427	60.571	30.896	62.962	1.00	40.52	C
ATOM	965	O	MET A 427	60.206	31.610	62.024	1.00	40.48	O
ATOM	966	CB	MET A 427	59.309	29.529	64.652	1.00	46.35	C
ATOM	967	CG	MET A 427	58.165	28.489	64.737	1.00	48.01	C
ATOM	968	SD	MET A 427	57.470	28.508	66.400	1.00	51.78	S
ATOM	969	CE	MET A 427	58.854	28.059	67.403	1.00	45.57	C
ATOM	970	N	LEU A 428	61.653	31.212	63.699	1.00	37.72	N
ATOM	971	CA	LEU A 428	62.386	32.435	63.480	1.00	36.03	C
ATOM	972	C	LEU A 428	62.778	32.561	62.036	1.00	36.86	C
ATOM	973	O	LEU A 428	62.648	33.594	61.343	1.00	36.32	O
ATOM	974	CB	LEU A 428	63.568	32.493	64.467	1.00	36.25	C
ATOM	975	CG	LEU A 428	63.098	32.740	65.898	1.00	35.44	C

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ATOM	976	CD1 LEU A 428	64.057	32.285	66.969	1.00	36.73	C
ATOM	977	CD2 LEU A 428	62.723	34.177	66.125	1.00	37.83	C
ATOM	978	N LEU A 429	63.240	31.432	61.475	1.00	40.60	N
ATOM	979	CA LEU A 429	63.706	31.476	60.065	1.00	41.29	C
ATOM	980	C LEU A 429	62.605	31.928	59.145	1.00	39.00	C
ATOM	981	O LEU A 429	62.720	32.870	58.371	1.00	39.51	O
ATOM	982	CB LEU A 429	64.313	30.144	59.690	1.00	43.27	C
ATOM	983	CG LEU A 429	65.812	30.002	59.966	1.00	45.30	C
ATOM	984	CD1 LEU A 429	66.293	28.587	59.649	1.00	45.70	C
ATOM	985	CD2 LEU A 429	66.629	31.027	59.197	1.00	43.74	C
ATOM	986	N ALA A 430	61.448	31.309	59.364	1.00	39.75	N
ATOM	987	CA ALA A 430	60.243	31.583	58.587	1.00	37.09	C
ATOM	988	C ALA A 430	59.798	33.011	58.767	1.00	38.56	C
ATOM	989	O ALA A 430	59.521	33.697	57.752	1.00	38.33	O
ATOM	990	CB ALA A 430	59.208	30.593	59.021	1.00	39.99	C
ATOM	991	N THR A 431	59.882	33.500	60.028	1.00	35.59	N
ATOM	992	CA THR A 431	59.549	34.937	60.144	1.00	36.46	C
ATOM	993	C THR A 431	60.428	35.826	59.333	1.00	37.93	C
ATOM	994	O THR A 431	59.934	36.643	58.554	1.00	38.61	O
ATOM	995	CB THR A 431	59.488	35.351	61.600	1.00	36.66	C
ATOM	996	OG1 THR A 431	58.696	34.368	62.308	1.00	44.00	O
ATOM	997	CG2 THR A 431	58.908	36.711	61.812	1.00	32.95	C
ATOM	998	N SER A 432	61.781	35.804	59.328	1.00	43.67	N
ATOM	999	CA SER A 432	62.459	36.829	58.499	1.00	45.86	C
ATOM	1000	C SER A 432	62.140	36.599	57.029	1.00	45.06	C
ATOM	1001	O SER A 432	62.151	37.499	56.200	1.00	40.01	O
ATOM	1002	CB SER A 432	63.961	37.037	58.613	1.00	45.04	C
ATOM	1003	OG SER A 432	64.652	35.870	58.844	1.00	44.31	O
ATOM	1004	N SER A 433	61.942	35.297	56.773	1.00	47.09	N
ATOM	1005	CA SER A 433	61.611	35.007	55.384	1.00	49.54	C
ATOM	1006	C SER A 433	60.360	35.760	54.981	1.00	49.50	C
ATOM	1007	O SER A 433	60.276	36.385	53.896	1.00	51.37	O
ATOM	1008	CB SER A 433	61.533	33.492	55.255	1.00	50.61	C
ATOM	1009	OG SER A 433	61.782	33.268	53.861	1.00	58.03	O
ATOM	1010	N ARG A 434	59.359	35.767	55.868	1.00	45.71	N
ATOM	1011	CA ARG A 434	58.112	36.442	55.471	1.00	45.67	C
ATOM	1012	C ARG A 434	58.365	37.904	55.424	1.00	45.99	C
ATOM	1013	O ARG A 434	57.741	38.684	54.686	1.00	48.03	O
ATOM	1014	CB ARG A 434	56.994	35.888	56.328	1.00	52.87	C
ATOM	1015	CG ARG A 434	55.825	36.768	56.669	1.00	61.64	C
ATOM	1016	CD ARG A 434	54.448	36.253	56.247	1.00	65.66	C
ATOM	1017	NE ARG A 434	53.910	37.123	55.212	1.00	71.37	N
ATOM	1018	CZ ARG A 434	52.755	37.777	55.178	1.00	74.32	C
ATOM	1019	NH1 ARG A 434	51.884	37.683	56.194	1.00	76.56	N
ATOM	1020	NH2 ARG A 434	52.466	38.531	54.113	1.00	72.73	N
ATOM	1021	N PHE A 435	59.278	38.400	56.271	1.00	45.66	N
ATOM	1022	CA PHE A 435	59.591	39.822	56.251	1.00	46.91	C
ATOM	1023	C PHE A 435	60.212	40.184	54.893	1.00	44.85	C
ATOM	1024	O PHE A 435	60.006	41.239	54.325	1.00	45.13	O

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ATOM	1025	CB PHE A 435	60.586	40.207	57.352	1.00	48.27	C
ATOM	1026	CG PHE A 435	59.982	40.529	58.672	1.00	51.19	C
ATOM	1027	CD1 PHE A 435	58.604	40.442	58.870	1.00	53.63	C
ATOM	1028	CD2 PHE A 435	60.782	40.922	59.746	1.00	47.96	C
ATOM	1029	CE1 PHE A 435	58.025	40.713	60.097	1.00	52.73	C
ATOM	1030	CE2 PHE A 435	60.194	41.181	60.955	1.00	47.26	C
ATOM	1031	CZ PHE A 435	58.840	41.076	61.157	1.00	48.94	C
ATOM	1032	N ARG A 436	61.056	39.323	54.400	1.00	47.63	N
ATOM	1033	CA ARG A 436	61.746	39.482	53.124	1.00	49.34	C
ATOM	1034	C ARG A 436	60.645	39.474	52.078	1.00	49.53	C
ATOM	1035	O ARG A 436	60.330	40.477	51.451	1.00	45.06	O
ATOM	1036	CB ARG A 436	62.682	38.315	52.896	1.00	50.60	C
ATOM	1037	CG ARG A 436	63.939	38.648	52.124	1.00	56.76	C
ATOM	1038	CD ARG A 436	64.616	37.327	51.713	1.00	61.86	C
ATOM	1039	NE ARG A 436	65.061	36.607	52.886	1.00	66.94	N
ATOM	1040	CZ ARG A 436	64.776	35.363	53.238	1.00	70.98	C
ATOM	1041	NH1 ARG A 436	63.978	34.637	52.445	1.00	72.78	N
ATOM	1042	NH2 ARG A 436	65.262	34.887	54.395	1.00	71.17	N
ATOM	1043	N MET A 437	59.931	38.317	52.119	1.00	53.08	N
ATOM	1044	CA MET A 437	58.819	38.277	51.152	1.00	57.01	C
ATOM	1045	C MET A 437	58.080	39.607	51.214	1.00	55.26	C
ATOM	1046	O MET A 437	58.069	40.283	50.197	1.00	57.39	O
ATOM	1047	CB MET A 437	57.941	37.108	51.344	1.00	63.52	C
ATOM	1048	CG MET A 437	58.313	35.727	50.890	1.00	71.66	C
ATOM	1049	SD MET A 437	57.582	34.534	52.062	1.00	84.11	S
ATOM	1050	CE MET A 437	55.865	35.144	52.090	1.00	79.21	C
ATOM	1051	N MET A 438	57.523	40.091	52.326	1.00	51.51	N
ATOM	1052	CA MET A 438	56.773	41.324	52.297	1.00	51.37	C
ATOM	1053	C MET A 438	57.538	42.607	52.026	1.00	50.12	C
ATOM	1054	O MET A 438	56.893	43.685	51.973	1.00	48.99	O
ATOM	1055	CB MET A 438	56.028	41.518	53.621	1.00	52.61	C
ATOM	1056	CG MET A 438	55.222	40.334	54.061	1.00	54.98	C
ATOM	1057	SD MET A 438	54.439	40.648	55.643	1.00	59.57	S
ATOM	1058	CE MET A 438	53.926	42.358	55.466	1.00	55.04	C
ATOM	1059	N ASN A 439	58.846	42.523	51.964	1.00	48.54	N
ATOM	1060	CA ASN A 439	59.767	43.614	51.794	1.00	45.77	C
ATOM	1061	C ASN A 439	59.605	44.567	52.968	1.00	42.78	C
ATOM	1062	O ASN A 439	59.522	45.787	52.761	1.00	39.35	O
ATOM	1063	CB ASN A 439	59.622	44.374	50.518	1.00	53.65	C
ATOM	1064	CG ASN A 439	60.859	45.147	50.093	1.00	60.47	C
ATOM	1065	OD1 ASN A 439	61.779	45.547	50.798	1.00	58.68	O
ATOM	1066	ND2 ASN A 439	60.875	45.410	48.768	1.00	65.24	N
ATOM	1067	N LEU A 440	59.545	43.937	54.172	1.00	39.68	N
ATOM	1068	CA LEU A 440	59.363	44.798	55.341	1.00	40.85	C
ATOM	1069	C LEU A 440	60.302	45.992	55.289	1.00	40.66	C
ATOM	1070	O LEU A 440	61.439	45.917	54.837	1.00	40.49	O
ATOM	1071	CB LEU A 440	59.506	44.052	56.677	1.00	42.20	C
ATOM	1072	CG LEU A 440	59.201	45.057	57.839	1.00	43.75	C
ATOM	1073	CD1 LEU A 440	57.802	45.601	57.642	1.00	45.00	C

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ATOM	1074	CD2 LEU A 440	59.380	44.431	59.202	1.00	42.76	C
ATOM	1075	N GLN A 441	59.881	47.156	55.736	1.00	42.17	N
ATOM	1076	CA GLN A 441	60.755	48.326	55.684	1.00	42.54	C
ATOM	1077	C GLN A 441	61.111	48.837	57.064	1.00	45.77	C
ATOM	1078	O GLN A 441	60.289	48.917	57.992	1.00	46.95	O
ATOM	1079	CB GLN A 441	59.947	49.392	54.913	1.00	44.80	C
ATOM	1080	CG GLN A 441	59.648	48.869	53.469	1.00	46.60	C
ATOM	1081	CD GLN A 441	60.870	49.261	52.620	1.00	46.29	C
ATOM	1082	OE1 GLN A 441	61.209	50.473	52.644	1.00	43.94	O
ATOM	1083	NE2 GLN A 441	61.391	48.217	51.988	1.00	43.50	N
ATOM	1084	N GLY A 442	62.361	49.221	57.240	1.00	44.76	N
ATOM	1085	CA GLY A 442	62.942	49.758	58.436	1.00	41.75	C
ATOM	1086	C GLY A 442	61.971	50.542	59.255	1.00	41.41	C
ATOM	1087	O GLY A 442	61.661	50.119	60.370	1.00	43.47	O
ATOM	1088	N GLU A 443	61.418	51.600	58.688	1.00	43.44	N
ATOM	1089	CA GLU A 443	60.442	52.464	59.287	1.00	43.18	C
ATOM	1090	C GLU A 443	59.181	51.714	59.768	1.00	41.51	C
ATOM	1091	O GLU A 443	58.536	52.266	60.688	1.00	41.33	O
ATOM	1092	CB GLU A 443	60.005	53.585	58.352	1.00	45.30	C
ATOM	1093	CG GLU A 443	60.996	54.545	57.786	1.00	46.12	C
ATOM	1094	CD GLU A 443	61.854	53.906	56.720	1.00	51.40	C
ATOM	1095	OE1 GLU A 443	61.523	52.818	56.225	1.00	51.51	O
ATOM	1096	OE2 GLU A 443	62.932	54.443	56.343	1.00	57.58	O
ATOM	1097	N GLU A 444	58.830	50.580	59.194	1.00	37.35	N
ATOM	1098	CA GLU A 444	57.661	49.801	59.612	1.00	38.11	C
ATOM	1099	C GLU A 444	58.071	48.899	60.782	1.00	36.47	C
ATOM	1100	O GLU A 444	57.364	48.667	61.760	1.00	40.60	O
ATOM	1101	CB GLU A 444	57.126	48.855	58.543	1.00	40.40	C
ATOM	1102	CG GLU A 444	56.654	49.456	57.251	1.00	43.75	C
ATOM	1103	CD GLU A 444	56.171	48.486	56.187	1.00	44.27	C
ATOM	1104	OE1 GLU A 444	56.948	47.714	55.593	1.00	42.90	O
ATOM	1105	OE2 GLU A 444	54.945	48.547	55.928	1.00	43.73	O
ATOM	1106	N PHE A 445	59.274	48.392	60.688	1.00	36.90	N
ATOM	1107	CA PHE A 445	59.910	47.530	61.676	1.00	36.32	C
ATOM	1108	C PHE A 445	59.990	48.218	63.020	1.00	38.08	C
ATOM	1109	O PHE A 445	59.624	47.708	64.078	1.00	43.18	O
ATOM	1110	CB PHE A 445	61.324	47.215	61.222	1.00	33.88	C
ATOM	1111	CG PHE A 445	62.219	46.649	62.240	1.00	34.44	C
ATOM	1112	CD1 PHE A 445	62.075	45.370	62.709	1.00	33.30	C
ATOM	1113	CD2 PHE A 445	63.265	47.438	62.742	1.00	35.81	C
ATOM	1114	CE1 PHE A 445	62.975	44.855	63.646	1.00	35.64	C
ATOM	1115	CE2 PHE A 445	64.199	46.911	63.618	1.00	34.03	C
ATOM	1116	CZ PHE A 445	64.031	45.624	64.090	1.00	33.63	C
ATOM	1117	N VAL A 446	60.370	49.468	62.998	1.00	36.38	N
ATOM	1118	CA VAL A 446	60.501	50.229	64.260	1.00	35.39	C
ATOM	1119	C VAL A 446	59.160	50.513	64.836	1.00	36.39	C
ATOM	1120	O VAL A 446	58.899	50.721	66.060	1.00	36.88	O
ATOM	1121	CB VAL A 446	61.340	51.422	63.743	1.00	37.96	C
ATOM	1122	CG1 VAL A 446	61.016	52.732	64.350	1.00	36.13	C

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ATOM	1123	CG2 VAL A 446	62.806	51.032	63.810	1.00	36.84	C
ATOM	1124	N CYS A 447	58.166	50.587	63.959	1.00	38.09	N
ATOM	1125	CA CYS A 447	56.756	50.836	64.384	1.00	36.81	C
ATOM	1126	C CYS A 447	56.242	49.584	65.066	1.00	35.90	C
ATOM	1127	O CYS A 447	55.686	49.628	66.147	1.00	36.40	O
ATOM	1128	CB CYS A 447	56.001	51.134	63.134	1.00	39.05	C
ATOM	1129	SG CYS A 447	55.897	52.861	62.706	1.00	45.24	S
ATOM	1130	N LEU A 448	56.515	48.431	64.448	1.00	37.34	N
ATOM	1131	CA LEU A 448	56.179	47.116	65.016	1.00	36.19	C
ATOM	1132	C LEU A 448	56.884	46.877	66.333	1.00	35.93	C
ATOM	1133	O LEU A 448	56.332	46.318	67.303	1.00	36.91	O
ATOM	1134	CB LEU A 448	56.644	46.016	64.059	1.00	37.42	C
ATOM	1135	CG LEU A 448	55.919	45.875	62.723	1.00	38.60	C
ATOM	1136	CD1 LEU A 448	56.204	44.485	62.166	1.00	38.61	C
ATOM	1137	CD2 LEU A 448	54.407	46.000	62.875	1.00	38.37	C
ATOM	1138	N LYS A 449	58.161	47.327	66.475	1.00	34.08	N
ATOM	1139	CA LYS A 449	58.759	47.056	67.800	1.00	33.35	C
ATOM	1140	C LYS A 449	58.051	47.861	68.885	1.00	32.12	C
ATOM	1141	O LYS A 449	57.772	47.421	69.977	1.00	31.98	O
ATOM	1142	CB LYS A 449	60.222	47.413	67.867	1.00	35.64	C
ATOM	1143	CG LYS A 449	61.196	46.311	67.540	1.00	40.11	C
ATOM	1144	CD LYS A 449	62.593	46.562	68.113	1.00	37.82	C
ATOM	1145	CE LYS A 449	63.209	47.746	67.359	1.00	39.59	C
ATOM	1146	NZ LYS A 449	64.552	48.079	67.932	1.00	45.13	N
ATOM	1147	N SER A 450	57.796	49.148	68.608	1.00	32.09	N
ATOM	1148	CA SER A 450	57.214	49.985	69.643	1.00	32.69	C
ATOM	1149	C SER A 450	55.872	49.379	70.046	1.00	35.21	C
ATOM	1150	O SER A 450	55.572	49.405	71.237	1.00	35.15	O
ATOM	1151	CB SER A 450	57.093	51.427	69.253	1.00	33.33	C
ATOM	1152	OG SER A 450	58.301	51.920	68.712	1.00	44.51	O
ATOM	1153	N ILE A 451	55.152	48.892	69.015	1.00	31.47	N
ATOM	1154	CA ILE A 451	53.871	48.281	69.300	1.00	29.67	C
ATOM	1155	C ILE A 451	54.073	47.088	70.212	1.00	29.71	C
ATOM	1156	O ILE A 451	53.319	46.948	71.179	1.00	30.52	O
ATOM	1157	CB ILE A 451	53.185	47.857	67.987	1.00	30.16	C
ATOM	1158	CG1 ILE A 451	52.654	49.104	67.276	1.00	29.31	C
ATOM	1159	CG2 ILE A 451	52.097	46.805	68.217	1.00	25.93	C
ATOM	1160	CD1 ILE A 451	52.274	48.796	65.821	1.00	32.04	C
ATOM	1161	N ILE A 452	55.075	46.229	69.918	1.00	28.54	N
ATOM	1162	CA ILE A 452	55.300	45.060	70.761	1.00	25.63	C
ATOM	1163	C ILE A 452	55.576	45.545	72.180	1.00	30.38	C
ATOM	1164	O ILE A 452	55.079	45.005	73.137	1.00	34.58	O
ATOM	1165	CB ILE A 452	56.469	44.234	70.281	1.00	26.82	C
ATOM	1166	CG1 ILE A 452	56.170	43.518	68.957	1.00	30.90	C
ATOM	1167	CG2 ILE A 452	57.009	43.259	71.314	1.00	21.12	C
ATOM	1168	CD1 ILE A 452	57.349	42.688	68.405	1.00	25.51	C
ATOM	1169	N LEU A 453	56.367	46.581	72.361	1.00	32.06	N
ATOM	1170	CA LEU A 453	56.675	47.098	73.654	1.00	34.04	C
ATOM	1171	C LEU A 453	55.436	47.537	74.371	1.00	34.53	C

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ATOM 1172 O LEU A 453	55.177 47.100 75.495 1.00 40.58	O
ATOM 1173 CB LEU A 453	57.676 48.265 73.594 1.00 33.55	C
ATOM 1174 CG LEU A 453	57.973 48.870 74.984 1.00 31.37	C
ATOM 1175 CD1 LEU A 453	58.292 47.746 75.949 1.00 27.35	C
ATOM 1176 CD2 LEU A 453	58.980 49.992 74.961 1.00 26.50	C
ATOM 1177 N LEU A 454	54.627 48.386 73.806 1.00 35.04	N
ATOM 1178 CA LEU A 454	53.404 48.815 74.482 1.00 35.08	C
ATOM 1179 C LEU A 454	52.313 47.814 74.641 1.00 37.41	C
ATOM 1180 O LEU A 454	51.468 47.943 75.510 1.00 36.19	O
ATOM 1181 CB LEU A 454	52.775 49.973 73.645 1.00 32.94	C
ATOM 1182 CG LEU A 454	53.728 51.185 73.576 1.00 34.24	C
ATOM 1183 CD1 LEU A 454	53.055 52.297 72.825 1.00 32.61	C
ATOM 1184 CD2 LEU A 454	54.126 51.597 74.987 1.00 34.42	C
ATOM 1185 N ASN A 455	52.180 46.850 73.728 1.00 42.96	N
ATOM 1186 CA ASN A 455	51.060 45.936 73.771 1.00 44.63	C
ATOM 1187 C ASN A 455	51.238 44.638 74.476 1.00 47.81	C
ATOM 1188 O ASN A 455	50.303 44.023 74.961 1.00 52.94	O
ATOM 1189 CB ASN A 455	50.762 45.569 72.292 1.00 44.66	C
ATOM 1190 CG ASN A 455	49.596 44.620 72.164 1.00 43.46	C
ATOM 1191 OD1 ASN A 455	49.696 43.551 71.583 1.00 42.54	O
ATOM 1192 ND2 ASN A 455	48.475 45.034 72.727 1.00 46.97	N
ATOM 1193 N SER A 456	52.395 44.046 74.548 1.00 50.76	N
ATOM 1194 CA SER A 456	52.427 42.713 75.145 1.00 53.37	C
ATOM 1195 C SER A 456	52.032 42.695 76.583 1.00 56.18	C
ATOM 1196 O SER A 456	51.549 41.691 77.113 1.00 56.74	O
ATOM 1197 CB SER A 456	53.794 42.093 74.786 1.00 52.37	C
ATOM 1198 OG SER A 456	53.964 41.972 73.368 1.00 40.19	O
ATOM 1199 N GLY A 457	52.241 43.761 77.316 1.00 61.86	N
ATOM 1200 CA GLY A 457	51.997 43.862 78.731 1.00 70.54	C
ATOM 1201 C GLY A 457	50.833 44.726 79.116 1.00 77.77	C
ATOM 1202 O GLY A 457	50.450 44.776 80.284 1.00 78.76	O
ATOM 1203 N VAL A 458	50.151 45.356 78.171 1.00 84.38	N
ATOM 1204 CA VAL A 458	48.987 46.195 78.378 1.00 90.25	C
ATOM 1205 C VAL A 458	47.897 45.551 79.210 1.00 96.24	C
ATOM 1206 O VAL A 458	46.948 46.250 79.609 1.00 98.11	O
ATOM 1207 CB VAL A 458	48.448 46.636 76.990 1.00 89.27	C
ATOM 1208 CG1 VAL A 458	47.739 45.491 76.289 1.00 89.46	C
ATOM 1209 CG2 VAL A 458	47.547 47.845 77.079 1.00 88.97	C
ATOM 1210 N TYR A 459	47.924 44.257 79.513 1.00101.74	N
ATOM 1211 CA TYR A 459	46.973 43.497 80.269 1.00104.80	C
ATOM 1212 C TYR A 459	47.332 43.286 81.740 1.00105.22	C
ATOM 1213 O TYR A 459	47.016 42.180 82.231 1.00105.07	O
ATOM 1214 CB TYR A 459	46.814 42.080 79.662 1.00107.02	C
ATOM 1215 CG TYR A 459	45.822 42.038 78.519 1.00110.17	C
ATOM 1216 CD1 TYR A 459	45.419 43.212 77.893 1.00110.98	C
ATOM 1217 CD2 TYR A 459	45.308 40.830 78.053 1.00110.39	C
ATOM 1218 CE1 TYR A 459	44.545 43.205 76.835 1.00112.30	C
ATOM 1219 CE2 TYR A 459	44.418 40.816 76.997 1.00112.11	C
ATOM 1220 CZ TYR A 459	44.051 42.000 76.399 1.00112.88	C

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ATOM	1221	OH TYR A 459	43.168	41.991	75.347	1.00115.80	O
ATOM	1222	N GLU A 470	43.165	56.078	83.507	1.00107.33	N
ATOM	1223	CA GLU A 470	43.526	57.004	82.435	1.00107.02	C
ATOM	1224	C GLU A 470	44.890	56.630	81.849	1.00105.48	C
ATOM	1225	O GLU A 470	45.363	57.299	80.943	1.00106.09	O
ATOM	1226	CB GLU A 470	43.575	58.456	82.919	1.00106.27	C
ATOM	1231	N GLU A 471	45.492	55.590	82.396	1.00103.12	N
ATOM	1232	CA GLU A 471	46.801	55.140	81.925	1.00101.16	C
ATOM	1233	C GLU A 471	46.592	54.169	80.779	1.00 99.18	C
ATOM	1234	O GLU A 471	47.055	54.348	79.647	1.00 99.80	O
ATOM	1235	CB GLU A 471	47.605	54.547	83.076	1.00101.62	C
ATOM	1240	N LYS A 472	45.728	53.170	81.002	1.00 95.72	N
ATOM	1241	CA LYS A 472	45.352	52.182	79.990	1.00 88.76	C
ATOM	1242	C LYS A 472	45.036	52.984	78.727	1.00 84.43	C
ATOM	1243	O LYS A 472	45.594	52.757	77.666	1.00 85.42	O
ATOM	1244	CB LYS A 472	44.096	51.416	80.408	1.00 89.61	C
ATOM	1249	N AASP A 473	44.145	53.954	78.913	0.50 80.32	N
ATOM	1250	N BASP A 473	44.142	53.947	78.917	0.50 81.68	N
ATOM	1251	CA AASP A 473	43.735	54.858	77.861	0.50 76.63	C
ATOM	1252	CA BASP A 473	43.727	54.830	77.848	0.50 78.99	C
ATOM	1253	C AASP A 473	44.905	55.533	77.166	0.50 72.53	C
ATOM	1254	C BASP A 473	44.863	55.585	77.186	0.50 74.62	C
ATOM	1255	O AASP A 473	44.906	55.645	75.937	0.50 70.54	O
ATOM	1256	O BASP A 473	45.017	55.398	75.961	0.50 73.32	O
ATOM	1257	CB AASP A 473	42.788	55.917	78.446	0.50 77.43	C
ATOM	1258	CB BASP A 473	42.628	55.750	78.383	0.50 81.54	C
ATOM	1259	CG AASP A 473	42.214	56.859	77.406	0.50 77.69	C
ATOM	1260	CG BASP A 473	41.329	55.002	78.624	0.50 83.12	C
ATOM	1261	OD1AASP A 473	41.206	56.487	76.758	0.50 77.87	O
ATOM	1262	OD1BASP A 473	41.105	53.923	78.040	0.50 83.70	O
ATOM	1263	OD2AASP A 473	42.774	57.965	77.239	0.50 76.09	O
ATOM	1264	OD2BASP A 473	40.508	55.512	79.421	0.50 84.94	O
ATOM	1265	N HIS A 474	45.903	55.985	77.921	1.00 70.51	N
ATOM	1266	CA HIS A 474	47.039	56.684	77.314	1.00 64.59	C
ATOM	1267	C HIS A 474	47.754	55.773	76.335	1.00 60.83	C
ATOM	1268	O HIS A 474	47.950	56.109	75.155	1.00 58.49	O
ATOM	1269	CB HIS A 474	48.007	57.255	78.327	1.00 64.63	C
ATOM	1270	CG HIS A 474	49.247	57.893	77.753	1.00 66.15	C
ATOM	1271	ND1 HIS A 474	49.230	58.987	76.893	1.00 64.28	N
ATOM	1272	CD2 HIS A 474	50.560	57.566	77.949	1.00 63.36	C
ATOM	1273	CE1 HIS A 474	50.461	59.305	76.567	1.00 63.50	C
ATOM	1274	NE2 HIS A 474	51.263	58.458	77.202	1.00 64.89	N
ATOM	1275	N ILE A 475	48.085	54.566	76.816	1.00 56.86	N
ATOM	1276	CA ILE A 475	48.793	53.658	75.933	1.00 56.72	C
ATOM	1277	C ILE A 475	48.013	53.327	74.667	1.00 57.11	C
ATOM	1278	O ILE A 475	48.606	53.228	73.567	1.00 54.05	O
ATOM	1279	CB ILE A 475	49.240	52.385	76.618	1.00 58.11	C
ATOM	1280	CG1 ILE A 475	49.983	52.704	77.908	1.00 60.17	C
ATOM	1281	CG2 ILE A 475	50.144	51.632	75.633	1.00 60.22	C

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ATOM	1282	CD1	ILE A 475	50.468	51.438	78.616	1.00	63.03	C
ATOM	1283	N	HIS A 476	46.701	53.150	74.800	1.00	55.97	N
ATOM	1284	CA	HIS A 476	45.863	52.867	73.648	1.00	58.59	C
ATOM	1285	C	HIS A 476	45.863	53.976	72.617	1.00	59.35	C
ATOM	1286	O	HIS A 476	45.714	53.730	71.394	1.00	61.12	O
ATOM	1287	CB	HIS A 476	44.463	52.526	74.106	1.00	64.75	C
ATOM	1288	CG	HIS A 476	44.333	51.131	74.657	1.00	72.37	C
ATOM	1289	ND1	HIS A 476	45.206	50.100	74.365	1.00	73.22	N
ATOM	1290	CD2	HIS A 476	43.393	50.595	75.501	1.00	74.42	C
ATOM	1291	CE1	HIS A 476	44.819	49.007	74.990	1.00	74.43	C
ATOM	1292	NE2	HIS A 476	43.721	49.266	75.694	1.00	74.59	N
ATOM	1293	N	ARG A 477	46.135	55.219	73.001	1.00	58.21	N
ATOM	1294	CA	ARG A 477	46.136	56.304	72.015	1.00	57.66	C
ATOM	1295	C	ARG A 477	47.505	56.399	71.380	1.00	55.49	C
ATOM	1296	O	ARG A 477	47.688	56.889	70.257	1.00	58.24	O
ATOM	1297	CB	ARG A 477	45.741	57.625	72.644	1.00	62.00	C
ATOM	1298	CG	ARG A 477	44.852	57.527	73.864	1.00	66.35	C
ATOM	1299	CD	ARG A 477	43.749	58.567	73.887	1.00	69.29	C
ATOM	1300	NE	ARG A 477	44.206	59.875	73.400	1.00	72.49	N
ATOM	1304	N	VAL A 478	48.506	55.917	72.109	1.00	51.61	N
ATOM	1305	CA	VAL A 478	49.864	55.952	71.511	1.00	48.31	C
ATOM	1306	C	VAL A 478	49.873	54.851	70.465	1.00	45.77	C
ATOM	1307	O	VAL A 478	50.367	54.991	69.353	1.00	46.44	O
ATOM	1308	CB	VAL A 478	50.926	55.692	72.583	1.00	48.87	C
ATOM	1309	CG1	VAL A 478	52.313	55.702	71.995	1.00	47.97	C
ATOM	1310	CG2	VAL A 478	50.754	56.714	73.712	1.00	47.54	C
ATOM	1311	N	LEU A 479	49.226	53.747	70.861	1.00	44.03	N
ATOM	1312	CA	LEU A 479	49.088	52.587	69.976	1.00	41.04	C
ATOM	1313	C	LEU A 479	48.311	52.989	68.741	1.00	41.59	C
ATOM	1314	O	LEU A 479	48.781	52.725	67.618	1.00	45.09	O
ATOM	1315	CB	LEU A 479	48.409	51.431	70.650	1.00	40.07	C
ATOM	1316	CG	LEU A 479	49.306	50.514	71.497	1.00	41.14	C
ATOM	1317	CD1	LEU A 479	48.428	49.487	72.159	1.00	38.92	C
ATOM	1318	CD2	LEU A 479	50.463	49.928	70.690	1.00	36.46	C
ATOM	1319	N	ASP A 480	47.211	53.712	68.960	1.00	42.05	N
ATOM	1320	CA	ASP A 480	46.470	54.214	67.789	1.00	42.41	C
ATOM	1321	C	ASP A 480	47.374	55.147	66.986	1.00	42.83	C
ATOM	1322	O	ASP A 480	47.305	55.139	65.748	1.00	42.30	O
ATOM	1323	CB	ASP A 480	45.201	54.953	68.099	1.00	42.23	C
ATOM	1324	CG	ASP A 480	44.053	54.203	68.672	1.00	44.04	C
ATOM	1325	OD1	ASP A 480	43.932	52.968	68.567	1.00	42.99	O
ATOM	1326	OD2	ASP A 480	43.187	54.890	69.284	1.00	48.06	O
ATOM	1327	N	LYS A 481	48.194	55.938	67.729	1.00	41.96	N
ATOM	1328	CA	LYS A 481	49.063	56.824	66.929	1.00	44.36	C
ATOM	1329	C	LYS A 481	50.015	55.990	66.111	1.00	39.42	C
ATOM	1330	O	LYS A 481	50.178	56.356	64.967	1.00	40.40	O
ATOM	1331	CB	LYS A 481	49.767	57.875	67.765	1.00	50.78	C
ATOM	1332	CG	LYS A 481	50.578	58.879	66.955	1.00	53.79	C
ATOM	1333	CD	LYS A 481	50.362	60.262	67.571	1.00	59.84	C

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ATOM	1334	CE	LYS A 481	50.299	61.305	66.443	1.00	64.03	C
ATOM	1335	NZ	LYS A 481	48.891	61.472	65.919	1.00	65.06	N
ATOM	1336	N	ILE A 482	50.585	54.906	66.617	1.00	37.30	N
ATOM	1337	CA	ILE A 482	51.484	54.115	65.740	1.00	37.67	C
ATOM	1338	C	ILE A 482	50.784	53.474	64.576	1.00	37.39	C
ATOM	1339	O	ILE A 482	51.369	53.361	63.504	1.00	40.01	O
ATOM	1340	CB	ILE A 482	52.223	53.033	66.573	1.00	38.51	C
ATOM	1341	CG1	ILE A 482	52.717	53.713	67.841	1.00	37.12	C
ATOM	1342	CG2	ILE A 482	53.229	52.354	65.681	1.00	32.84	C
ATOM	1343	CD1	ILE A 482	53.464	52.910	68.842	1.00	36.63	C
ATOM	1344	N	THR A 483	49.541	53.024	64.688	1.00	37.56	N
ATOM	1345	CA	THR A 483	48.801	52.521	63.553	1.00	38.49	C
ATOM	1346	C	THR A 483	48.707	53.631	62.498	1.00	41.74	C
ATOM	1347	O	THR A 483	49.115	53.398	61.323	1.00	41.89	O
ATOM	1348	CB	THR A 483	47.358	52.105	63.878	1.00	39.30	C
ATOM	1349	OG1	THR A 483	47.465	50.929	64.705	1.00	40.84	O
ATOM	1350	CG2	THR A 483	46.655	51.747	62.564	1.00	36.88	C
ATOM	1351	N	ASP A 484	48.231	54.813	62.941	1.00	43.21	N
ATOM	1352	CA	ASP A 484	48.226	55.987	62.034	1.00	43.09	C
ATOM	1353	C	ASP A 484	49.567	56.088	61.303	1.00	42.19	C
ATOM	1354	O	ASP A 484	49.591	56.087	60.048	1.00	43.92	O
ATOM	1355	CB	ASP A 484	48.063	57.317	62.737	1.00	43.77	C
ATOM	1356	CG	ASP A 484	46.749	57.475	63.456	1.00	47.64	C
ATOM	1357	OD1	ASP A 484	45.800	56.705	63.146	1.00	46.18	O
ATOM	1358	OD2	ASP A 484	46.681	58.362	64.347	1.00	51.47	O
ATOM	1359	N	THR A 485	50.645	56.123	62.071	1.00	39.45	N
ATOM	1360	CA	THR A 485	51.990	56.225	61.436	1.00	40.57	C
ATOM	1361	C	THR A 485	52.253	55.079	60.500	1.00	40.59	C
ATOM	1362	O	THR A 485	52.717	55.274	59.365	1.00	44.93	O
ATOM	1363	CB	THR A 485	53.104	56.279	62.489	1.00	39.40	C
ATOM	1364	OG1	THR A 485	52.575	56.995	63.625	1.00	35.82	O
ATOM	1365	CG2	THR A 485	54.377	56.779	61.950	1.00	34.78	C
ATOM	1366	N	LEU A 486	51.912	53.873	60.902	1.00	42.16	N
ATOM	1367	CA	LEU A 486	52.127	52.729	59.939	1.00	43.09	C
ATOM	1368	C	LEU A 486	51.312	52.966	58.681	1.00	40.80	C
ATOM	1369	O	LEU A 486	51.781	52.838	57.558	1.00	38.70	O
ATOM	1370	CB	LEU A 486	51.755	51.499	60.688	1.00	42.99	C
ATOM	1371	CG	LEU A 486	52.613	50.294	60.838	1.00	44.81	C
ATOM	1372	CD1	LEU A 486	54.082	50.478	60.590	1.00	44.10	C
ATOM	1373	CD2	LEU A 486	52.347	49.676	62.216	1.00	43.71	C
ATOM	1374	N	ILE A 487	50.040	53.365	58.786	1.00	42.87	N
ATOM	1375	CA	ILE A 487	49.240	53.582	57.545	1.00	44.76	C
ATOM	1376	C	ILE A 487	49.755	54.772	56.749	1.00	44.95	C
ATOM	1377	O	ILE A 487	49.848	54.748	55.533	1.00	41.29	O
ATOM	1378	CB	ILE A 487	47.760	53.764	57.879	1.00	45.98	C
ATOM	1379	CG1	ILE A 487	47.046	52.483	58.286	1.00	42.68	C
ATOM	1380	CG2	ILE A 487	47.016	54.425	56.725	1.00	48.28	C
ATOM	1381	CD1	ILE A 487	47.114	51.396	57.264	1.00	43.54	C
ATOM	1382	N	HIS A 488	50.166	55.842	57.432	1.00	48.83	N

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ATOM 1383	CA HIS A 488	50.832	56.961	56.775	1.00	49.75	C
ATOM 1384	C HIS A 488	52.052	56.545	55.987	1.00	48.04	C
ATOM 1385	O HIS A 488	52.308	57.018	54.876	1.00	52.94	O
ATOM 1386	CB HIS A 488	51.218	57.976	57.860	1.00	52.56	C
ATOM 1387	CG HIS A 488	51.999	59.098	57.240	1.00	57.68	C
ATOM 1388	ND1 HIS A 488	53.327	58.970	56.882	1.00	59.10	N
ATOM 1389	CD2 HIS A 488	51.620	60.355	56.920	1.00	59.02	C
ATOM 1390	CE1 HIS A 488	53.745	60.115	56.366	1.00	59.80	C
ATOM 1391	NE2 HIS A 488	52.734	60.958	56.385	1.00	60.71	N
ATOM 1392	N LEU A 489	52.888	55.639	56.452	1.00	46.72	N
ATOM 1393	CA LEU A 489	54.044	55.192	55.690	1.00	45.24	C
ATOM 1394	C LEU A 489	53.585	54.449	54.440	1.00	44.92	C
ATOM 1395	O LEU A 489	54.325	54.409	53.459	1.00	46.98	O
ATOM 1396	CB LEU A 489	54.900	54.199	56.516	1.00	44.02	C
ATOM 1397	CG LEU A 489	55.743	54.841	57.628	1.00	46.75	C
ATOM 1398	CD1 LEU A 489	56.068	53.856	58.738	1.00	45.91	C
ATOM 1399	CD2 LEU A 489	57.037	55.400	57.046	1.00	43.69	C
ATOM 1400	N MET A 490	52.442	53.798	54.508	1.00	44.91	N
ATOM 1401	CA MET A 490	51.965	52.951	53.418	1.00	48.26	C
ATOM 1402	C MET A 490	51.365	53.704	52.253	1.00	48.02	C
ATOM 1403	O MET A 490	51.571	53.374	51.069	1.00	43.52	O
ATOM 1404	CB MET A 490	50.931	51.977	54.030	1.00	51.41	C
ATOM 1405	CG MET A 490	51.672	50.853	54.797	1.00	49.69	C
ATOM 1406	SD MET A 490	50.415	49.777	55.481	1.00	47.26	S
ATOM 1407	CE MET A 490	51.453	48.686	56.472	1.00	49.94	C
ATOM 1408	N ALA A 491	50.596	54.711	52.631	1.00	50.20	N
ATOM 1409	CA ALA A 491	49.971	55.677	51.736	1.00	52.27	C
ATOM 1410	C ALA A 491	51.094	56.449	51.046	1.00	57.27	C
ATOM 1411	O ALA A 491	51.364	56.361	49.852	1.00	57.13	O
ATOM 1412	CB ALA A 491	49.144	56.667	52.566	1.00	50.19	C
ATOM 1413	N LYS A 492	51.947	57.103	51.868	1.00	60.59	N
ATOM 1414	CA LYS A 492	53.074	57.821	51.263	1.00	62.67	C
ATOM 1415	C LYS A 492	53.843	56.912	50.319	1.00	61.77	C
ATOM 1416	O LYS A 492	54.478	57.443	49.416	1.00	63.72	O
ATOM 1417	CB LYS A 492	53.920	58.444	52.351	1.00	63.55	C
ATOM 1418	CG LYS A 492	54.888	59.509	51.953	1.00	65.38	C
ATOM 1422	N ALA A 493	53.818	55.599	50.461	1.00	59.10	N
ATOM 1423	CA ALA A 493	54.540	54.718	49.569	1.00	60.41	C
ATOM 1424	C ALA A 493	53.686	54.393	48.342	1.00	61.29	C
ATOM 1425	O ALA A 493	54.118	53.636	47.472	1.00	60.89	O
ATOM 1426	CB ALA A 493	54.964	53.443	50.284	1.00	58.60	C
ATOM 1427	N GLY A 494	52.464	54.897	48.330	1.00	61.59	N
ATOM 1428	CA GLY A 494	51.542	54.710	47.240	1.00	63.74	C
ATOM 1429	C GLY A 494	50.555	53.594	47.368	1.00	65.33	C
ATOM 1430	O GLY A 494	49.742	53.336	46.450	1.00	68.41	O
ATOM 1431	N LEU A 495	50.533	52.861	48.493	1.00	63.96	N
ATOM 1432	CA LEU A 495	49.546	51.773	48.593	1.00	58.59	C
ATOM 1433	C LEU A 495	48.134	52.271	48.443	1.00	58.06	C
ATOM 1434	O LEU A 495	47.735	53.379	48.799	1.00	56.91	O

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ATOM	1435	CB LEU A 495	49.732	51.021	49.907	1.00	58.36	C
ATOM	1436	CG LEU A 495	50.979	50.136	50.029	1.00	57.55	C
ATOM	1437	CD1 LEU A 495	50.646	48.750	50.538	1.00	52.48	C
ATOM	1438	CD2 LEU A 495	51.767	50.006	48.718	1.00	58.19	C
ATOM	1439	N THR A 496	47.275	51.380	47.919	1.00	58.45	N
ATOM	1440	CA THR A 496	45.857	51.787	47.808	1.00	57.29	C
ATOM	1441	C THR A 496	45.259	51.746	49.201	1.00	55.11	C
ATOM	1442	O THR A 496	45.842	51.087	50.052	1.00	57.18	O
ATOM	1443	CB THR A 496	45.038	50.909	46.867	1.00	57.90	C
ATOM	1444	OG1 THR A 496	44.908	49.584	47.382	1.00	59.37	O
ATOM	1445	CG2 THR A 496	45.608	50.827	45.465	1.00	55.46	C
ATOM	1446	N LEU A 497	44.128	52.356	49.468	1.00	55.27	N
ATOM	1447	CA LEU A 497	43.533	52.264	50.784	1.00	57.86	C
ATOM	1448	C LEU A 497	43.296	50.776	51.100	1.00	58.92	C
ATOM	1449	O LEU A 497	43.492	50.361	52.231	1.00	61.57	O
ATOM	1450	CB LEU A 497	42.210	52.946	50.981	1.00	58.80	C
ATOM	1451	CG LEU A 497	42.176	54.431	51.253	1.00	62.15	C
ATOM	1452	CD1 LEU A 497	40.717	54.877	51.444	1.00	65.00	C
ATOM	1453	CD2 LEU A 497	42.982	54.819	52.483	1.00	64.40	C
ATOM	1454	N GLN A 498	42.840	50.016	50.116	1.00	57.38	N
ATOM	1455	CA GLN A 498	42.669	48.597	50.349	1.00	55.74	C
ATOM	1456	C GLN A 498	44.011	47.986	50.680	1.00	55.51	C
ATOM	1457	O GLN A 498	44.127	47.270	51.653	1.00	55.98	O
ATOM	1458	CB GLN A 498	42.037	47.885	49.161	1.00	56.58	C
ATOM	1459	CG GLN A 498	41.901	46.397	49.303	1.00	58.82	C
ATOM	1460	CD GLN A 498	41.090	45.718	48.242	1.00	60.96	C
ATOM	1461	OE1 GLN A 498	41.304	45.928	47.056	1.00	63.68	O
ATOM	1462	NE2 GLN A 498	40.134	44.875	48.625	1.00	62.29	N
ATOM	1463	N GLN A 499	45.055	48.224	49.917	1.00	56.42	N
ATOM	1464	CA GLN A 499	46.365	47.642	50.216	1.00	56.77	C
ATOM	1465	C GLN A 499	46.910	48.083	51.571	1.00	54.48	C
ATOM	1466	O GLN A 499	47.614	47.301	52.223	1.00	52.93	O
ATOM	1467	CB GLN A 499	47.323	48.036	49.117	1.00	60.49	C
ATOM	1468	CG GLN A 499	46.899	47.577	47.720	1.00	63.18	C
ATOM	1469	CD GLN A 499	47.943	48.181	46.768	1.00	66.27	C
ATOM	1470	OE1 GLN A 499	48.011	49.401	46.687	1.00	64.80	O
ATOM	1471	NE2 GLN A 499	48.689	47.282	46.139	1.00	67.90	N
ATOM	1472	N GLN A 500	46.626	49.298	51.982	1.00	49.56	N
ATOM	1473	CA GLN A 500	46.992	49.791	53.283	1.00	47.83	C
ATOM	1474	C GLN A 500	46.508	48.888	54.400	1.00	48.48	C
ATOM	1475	O GLN A 500	47.258	48.320	55.208	1.00	49.65	O
ATOM	1476	CB GLN A 500	46.422	51.236	53.446	1.00	46.97	C
ATOM	1477	CG GLN A 500	47.355	52.289	52.796	1.00	42.84	C
ATOM	1478	CD GLN A 500	46.661	53.575	52.477	1.00	39.88	C
ATOM	1479	OE1 GLN A 500	45.984	54.134	53.307	1.00	38.64	O
ATOM	1480	NE2 GLN A 500	46.773	54.116	51.276	1.00	39.86	N
ATOM	1481	N HIS A 501	45.190	48.672	54.480	1.00	47.29	N
ATOM	1482	CA HIS A 501	44.552	47.861	55.505	1.00	42.58	C
ATOM	1483	C HIS A 501	44.996	46.422	55.449	1.00	43.22	C

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ATOM 1484 O HIS A 501	45.204 45.723 56.460 1.00 45.13	O
ATOM 1485 CB HIS A 501	43.067 48.002 55.485 1.00 41.84	C
ATOM 1486 CG AHIS A 501	42.245 47.480 54.393 0.50 43.18	C
ATOM 1487 CG BHIS A 501	42.483 49.360 55.390 0.50 43.53	C
ATOM 1488 ND1AHIS A 501	41.395 48.280 53.648 0.50 44.55	N
ATOM 1489 ND1BHIS A 501	42.849 50.353 56.286 0.50 45.90	N
ATOM 1490 CD2AHIS A 501	42.076 46.219 53.916 0.50 43.33	C
ATOM 1491 CD2BHIS A 501	41.577 49.916 54.558 0.50 42.37	C
ATOM 1492 CE1AHIS A 501	40.760 47.503 52.765 0.50 44.96	C
ATOM 1493 CE1BHIS A 501	42.205 51.471 55.986 0.50 46.12	C
ATOM 1494 NE2AHIS A 501	41.192 46.251 52.879 0.50 41.39	N
ATOM 1495 NE2BHIS A 501	41.427 51.225 54.935 0.50 44.23	N
ATOM 1496 N GLN A 502	45.258 45.931 54.236 1.00 42.10	N
ATOM 1497 CA GLN A 502	45.665 44.544 54.122 1.00 40.55	C
ATOM 1498 C GLN A 502	47.070 44.369 54.674 1.00 41.26	C
ATOM 1499 O GLN A 502	47.223 43.325 55.308 1.00 39.67	O
ATOM 1500 CB GLN A 502	45.696 44.016 52.715 1.00 41.12	C
ATOM 1501 CG GLN A 502	44.574 44.566 51.860 1.00 40.32	C
ATOM 1502 CD GLN A 502	44.320 43.508 50.808 1.00 42.78	C
ATOM 1503 OE1 GLN A 502	43.242 42.927 50.851 1.00 49.36	O
ATOM 1504 NE2 GLN A 502	45.312 43.328 49.986 1.00 41.14	N
ATOM 1505 N ARG A 503	47.950 45.305 54.294 1.00 40.71	N
ATOM 1506 CA ARG A 503	49.327 45.244 54.774 1.00 37.17	C
ATOM 1507 C ARG A 503	49.317 45.458 56.299 1.00 35.75	C
ATOM 1508 O ARG A 503	49.915 44.683 57.058 1.00 33.57	O
ATOM 1509 CB ARG A 503	50.177 46.335 54.137 1.00 40.97	C
ATOM 1510 CG ARG A 503	51.671 46.162 54.431 1.00 45.67	C
ATOM 1511 CD ARG A 503	52.568 47.135 53.682 1.00 43.81	C
ATOM 1512 NE ARG A 503	53.964 46.879 53.959 1.00 40.13	N
ATOM 1513 CZ ARG A 503	54.707 45.888 53.566 1.00 40.13	C
ATOM 1514 NH1 ARG A 503	54.230 44.968 52.777 1.00 39.43	N
ATOM 1515 NH2 ARG A 503	55.981 45.772 53.975 1.00 41.35	N
ATOM 1516 N LEU A 504	48.556 46.448 56.780 1.00 33.53	N
ATOM 1517 CA LEU A 504	48.500 46.664 58.228 1.00 34.14	C
ATOM 1518 C LEU A 504	48.137 45.336 58.897 1.00 35.62	C
ATOM 1519 O LEU A 504	48.825 44.902 59.816 1.00 38.42	O
ATOM 1520 CB LEU A 504	47.501 47.693 58.699 1.00 33.74	C
ATOM 1521 CG LEU A 504	47.267 47.904 60.186 1.00 32.73	C
ATOM 1522 CD1 LEU A 504	48.459 48.646 60.839 1.00 33.32	C
ATOM 1523 CD2 LEU A 504	46.035 48.786 60.445 1.00 28.14	C
ATOM 1524 N ALA A 505	47.091 44.663 58.408 1.00 34.89	N
ATOM 1525 CA ALA A 505	46.765 43.384 59.027 1.00 30.63	C
ATOM 1526 C ALA A 505	47.844 42.353 58.814 1.00 30.88	C
ATOM 1527 O ALA A 505	48.122 41.505 59.677 1.00 29.79	O
ATOM 1528 CB ALA A 505	45.417 42.908 58.511 1.00 32.54	C
ATOM 1529 N GLN A 506	48.524 42.304 57.679 1.00 34.12	N
ATOM 1530 CA GLN A 506	49.518 41.245 57.498 1.00 38.19	C
ATOM 1531 C GLN A 506	50.601 41.441 58.544 1.00 36.89	C
ATOM 1532 O GLN A 506	51.080 40.450 59.135 1.00 36.61	O

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ATOM	1533	CB	GLN A 506	50.040	41.099	56.070	1.00	45.24	C
ATOM	1534	CG	GLN A 506	48.933	40.987	55.024	1.00	53.31	C
ATOM	1535	CD	GLN A 506	49.221	41.548	53.640	1.00	56.75	C
ATOM	1536	OE1	GLN A 506	50.344	41.868	53.225	1.00	58.50	O
ATOM	1537	NE2	GLN A 506	48.166	41.687	52.827	1.00	57.68	N
ATOM	1538	N	LEU A 507	50.926	42.703	58.807	1.00	35.11	N
ATOM	1539	CA	LEU A 507	51.952	42.976	59.826	1.00	32.90	C
ATOM	1540	C	LEU A 507	51.478	42.609	61.209	1.00	32.31	C
ATOM	1541	O	LEU A 507	52.136	41.729	61.799	1.00	32.90	O
ATOM	1542	CB	LEU A 507	52.368	44.441	59.738	1.00	33.00	C
ATOM	1543	CG	LEU A 507	53.124	44.781	58.436	1.00	30.90	C
ATOM	1544	CD1	LEU A 507	53.407	46.266	58.363	1.00	33.64	C
ATOM	1545	CD2	LEU A 507	54.326	43.898	58.353	1.00	26.56	C
ATOM	1546	N	LEU A 508	50.381	43.190	61.720	1.00	29.06	N
ATOM	1547	CA	LEU A 508	49.943	42.806	63.067	1.00	29.08	C
ATOM	1548	C	LEU A 508	49.768	41.341	63.326	1.00	31.97	C
ATOM	1549	O	LEU A 508	50.337	40.833	64.325	1.00	31.14	O
ATOM	1550	CB	LEU A 508	48.726	43.606	63.452	1.00	29.57	C
ATOM	1551	CG	LEU A 508	48.966	45.119	63.181	1.00	30.98	C
ATOM	1552	CD1	LEU A 508	47.708	45.877	63.540	1.00	28.17	C
ATOM	1553	CD2	LEU A 508	50.185	45.594	63.945	1.00	25.29	C
ATOM	1554	N	LEU A 509	49.333	40.542	62.333	1.00	31.90	N
ATOM	1555	CA	LEU A 509	49.247	39.089	62.497	1.00	27.26	C
ATOM	1556	C	LEU A 509	50.588	38.474	62.724	1.00	28.18	C
ATOM	1557	O	LEU A 509	50.694	37.425	63.363	1.00	31.85	O
ATOM	1558	CB	LEU A 509	48.561	38.422	61.318	1.00	23.15	C
ATOM	1559	CG	LEU A 509	47.064	38.638	61.213	1.00	25.76	C
ATOM	1560	CD1	LEU A 509	46.469	37.882	60.057	1.00	24.02	C
ATOM	1561	CD2	LEU A 509	46.383	38.201	62.553	1.00	22.70	C
ATOM	1562	N	ILE A 510	51.638	39.130	62.234	1.00	31.59	N
ATOM	1563	CA	ILE A 510	52.997	38.574	62.437	1.00	31.40	C
ATOM	1564	C	ILE A 510	53.334	38.772	63.913	1.00	30.63	C
ATOM	1565	O	ILE A 510	54.010	37.877	64.420	1.00	31.28	O
ATOM	1566	CB	ILE A 510	54.010	39.169	61.483	1.00	34.47	C
ATOM	1567	CG1	ILE A 510	53.979	38.367	60.163	1.00	37.44	C
ATOM	1568	CG2	ILE A 510	55.464	39.221	61.979	1.00	36.20	C
ATOM	1569	CD1	ILE A 510	54.284	39.292	58.957	1.00	38.44	C
ATOM	1570	N	LEU A 511	52.783	39.785	64.592	1.00	27.44	N
ATOM	1571	CA	LEU A 511	53.047	39.907	66.021	1.00	28.51	C
ATOM	1572	C	LEU A 511	52.535	38.703	66.757	1.00	32.18	C
ATOM	1573	O	LEU A 511	53.240	38.241	67.686	1.00	38.66	O
ATOM	1574	CB	LEU A 511	52.586	41.207	66.631	1.00	27.31	C
ATOM	1575	CG	LEU A 511	53.002	42.452	65.796	1.00	28.29	C
ATOM	1576	CD1	LEU A 511	52.496	43.707	66.420	1.00	24.10	C
ATOM	1577	CD2	LEU A 511	54.528	42.469	65.580	1.00	24.27	C
ATOM	1578	N	SER A 512	51.468	38.078	66.371	1.00	34.01	N
ATOM	1579	CA	SER A 512	50.960	36.841	66.927	1.00	34.05	C
ATOM	1580	C	SER A 512	51.986	35.743	66.920	1.00	32.61	C
ATOM	1581	O	SER A 512	52.133	35.062	67.931	1.00	36.28	O

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ATOM	1582	CB	SER A 512	49.730	36.415	66.073	1.00	36.45	C
ATOM	1583	OG	SER A 512	48.657	36.567	67.007	1.00	41.54	O
ATOM	1584	N	HIS A 513	52.716	35.584	65.839	1.00	32.89	N
ATOM	1585	CA	HIS A 513	53.766	34.577	65.746	1.00	33.89	C
ATOM	1586	C	HIS A 513	54.969	34.971	66.579	1.00	33.11	C
ATOM	1587	O	HIS A 513	55.588	34.159	67.263	1.00	34.48	O
ATOM	1588	CB	HIS A 513	54.201	34.456	64.285	1.00	37.72	C
ATOM	1589	CG	HIS A 513	53.098	34.018	63.383	1.00	40.23	C
ATOM	1590	ND1	HIS A 513	52.317	32.930	63.699	1.00	45.67	N
ATOM	1591	CD2	HIS A 513	52.646	34.429	62.190	1.00	43.55	C
ATOM	1592	CE1	HIS A 513	51.403	32.727	62.765	1.00	44.13	C
ATOM	1593	NE2	HIS A 513	51.605	33.640	61.829	1.00	44.41	N
ATOM	1594	N	ILE A 514	55.288	36.268	66.530	1.00	33.10	N
ATOM	1595	CA	ILE A 514	56.433	36.756	67.334	1.00	31.94	C
ATOM	1596	C	ILE A 514	56.104	36.408	68.766	1.00	32.61	C
ATOM	1597	O	ILE A 514	56.828	35.680	69.447	1.00	31.73	O
ATOM	1598	CB	ILE A 514	56.732	38.208	66.994	1.00	30.68	C
ATOM	1599	CG1	ILE A 514	57.427	38.276	65.644	1.00	32.27	C
ATOM	1600	CG2	ILE A 514	57.654	38.845	68.035	1.00	32.24	C
ATOM	1601	CD1	ILE A 514	57.666	39.646	65.073	1.00	31.53	C
ATOM	1602	N	ARG A 515	54.915	36.824	69.255	1.00	33.02	N
ATOM	1603	CA	ARG A 515	54.554	36.406	70.609	1.00	32.91	C
ATOM	1604	C	ARG A 515	54.736	34.913	70.832	1.00	33.04	C
ATOM	1605	O	ARG A 515	55.158	34.423	71.871	1.00	30.76	O
ATOM	1606	CB	ARG A 515	53.047	36.671	70.737	1.00	36.94	C
ATOM	1607	CG	ARG A 515	52.620	36.398	72.202	1.00	34.83	C
ATOM	1608	CD	ARG A 515	53.103	37.571	72.993	1.00	33.43	C
ATOM	1609	NE	ARG A 515	52.093	37.859	74.004	1.00	38.70	N
ATOM	1610	CZ	ARG A 515	51.518	39.040	74.027	1.00	40.22	C
ATOM	1611	NH1	ARG A 515	51.830	39.947	73.130	1.00	44.71	N
ATOM	1612	NH2	ARG A 515	50.638	39.215	74.964	1.00	46.87	N
ATOM	1613	N	HIS A 516	54.238	34.150	69.837	1.00	36.19	N
ATOM	1614	CA	HIS A 516	54.282	32.686	69.913	1.00	36.21	C
ATOM	1615	C	HIS A 516	55.707	32.263	70.118	1.00	35.50	C
ATOM	1616	O	HIS A 516	55.992	31.511	71.047	1.00	38.53	O
ATOM	1617	CB	HIS A 516	53.671	32.077	68.655	1.00	39.92	C
ATOM	1618	CG	HIS A 516	53.546	30.583	68.789	1.00	43.85	C
ATOM	1619	ND1	HIS A 516	52.560	30.007	69.565	1.00	45.49	N
ATOM	1620	CD2	HIS A 516	54.254	29.565	68.272	1.00	43.36	C
ATOM	1621	CE1	HIS A 516	52.671	28.702	69.525	1.00	42.83	C
ATOM	1622	NE2	HIS A 516	53.682	28.417	68.754	1.00	44.73	N
ATOM	1623	N	MET A 517	56.642	32.758	69.280	1.00	34.02	N
ATOM	1624	CA	MET A 517	58.044	32.363	69.496	1.00	33.79	C
ATOM	1625	C	MET A 517	58.582	32.756	70.860	1.00	33.49	C
ATOM	1626	O	MET A 517	59.128	31.928	71.588	1.00	35.14	O
ATOM	1627	CB	MET A 517	58.907	32.894	68.379	1.00	33.68	C
ATOM	1628	CG	MET A 517	58.635	32.256	67.047	1.00	34.56	C
ATOM	1629	SD	MET A 517	59.379	33.052	65.684	1.00	39.78	S
ATOM	1630	CE	MET A 517	58.650	34.676	65.728	1.00	36.45	C

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ATOM 1631 N SER A 518	58.287 33.932 71.391 1.00 32.17	N
ATOM 1632 CA SER A 518	58.814 34.255 72.728 1.00 33.21	C
ATOM 1633 C SER A 518	58.258 33.351 73.810 1.00 34.37	C
ATOM 1634 O SER A 518	59.026 32.919 74.699 1.00 30.18	O
ATOM 1635 CB SER A 518	58.660 35.740 73.023 1.00 31.26	C
ATOM 1636 OG SER A 518	58.344 35.917 74.367 1.00 28.79	O
ATOM 1637 N ASN A 519	56.954 33.031 73.778 1.00 32.58	N
ATOM 1638 CA ASN A 519	56.470 32.071 74.778 1.00 33.07	C
ATOM 1639 C ASN A 519	57.147 30.732 74.586 1.00 37.75	C
ATOM 1640 O ASN A 519	57.570 30.029 75.506 1.00 35.09	O
ATOM 1641 CB ASN A 519	54.992 31.804 74.532 1.00 34.03	C
ATOM 1642 CG ASN A 519	54.162 33.022 74.946 1.00 32.85	C
ATOM 1643 OD1 ASN A 519	54.541 33.610 75.938 1.00 29.80	O
ATOM 1644 ND2 ASN A 519	53.088 33.307 74.226 1.00 33.79	N
ATOM 1645 N LYS A 520	57.315 30.322 73.285 1.00 41.23	N
ATOM 1646 CA LYS A 520	57.986 28.990 73.213 1.00 44.55	C
ATOM 1647 C LYS A 520	59.387 29.139 73.775 1.00 46.06	C
ATOM 1648 O LYS A 520	59.917 28.260 74.463 1.00 49.52	O
ATOM 1649 CB LYS A 520	57.968 28.446 71.812 1.00 47.67	C
ATOM 1650 CG LYS A 520	56.670 27.855 71.277 1.00 49.96	C
ATOM 1651 CD LYS A 520	55.721 27.402 72.365 1.00 52.10	C
ATOM 1652 CE LYS A 520	55.319 25.943 72.184 1.00 56.23	C
ATOM 1653 NZ LYS A 520	55.534 25.198 73.469 1.00 59.42	N
ATOM 1654 N GLY A 521	60.058 30.267 73.515 1.00 41.38	N
ATOM 1655 CA GLY A 521	61.432 30.412 73.867 1.00 39.78	C
ATOM 1656 C GLY A 521	61.658 30.534 75.347 1.00 40.02	C
ATOM 1657 O GLY A 521	62.701 30.165 75.890 1.00 41.28	O
ATOM 1658 N MET A 522	60.678 31.118 75.998 1.00 41.42	N
ATOM 1659 CA MET A 522	60.768 31.349 77.433 1.00 42.08	C
ATOM 1660 C MET A 522	60.717 30.041 78.162 1.00 49.07	C
ATOM 1661 O MET A 522	61.509 29.838 79.085 1.00 56.07	O
ATOM 1662 CB MET A 522	59.684 32.291 77.829 1.00 39.53	C
ATOM 1663 CG MET A 522	60.157 33.731 77.541 1.00 42.45	C
ATOM 1664 SD MET A 522	59.509 34.694 78.912 1.00 49.75	S
ATOM 1665 CE MET A 522	58.965 36.121 77.995 1.00 43.03	C
ATOM 1666 N GLU A 523	59.893 29.147 77.687 1.00 54.39	N
ATOM 1667 CA GLU A 523	59.767 27.782 78.081 1.00 58.80	C
ATOM 1668 C GLU A 523	61.095 27.061 77.843 1.00 60.25	C
ATOM 1669 O GLU A 523	61.546 26.303 78.661 1.00 61.66	O
ATOM 1670 CB GLU A 523	58.760 27.032 77.156 1.00 60.53	C
ATOM 1671 CG GLU A 523	57.490 26.591 77.833 1.00 65.10	C
ATOM 1672 CD GLU A 523	56.457 26.095 76.829 1.00 70.51	C
ATOM 1673 OE1 GLU A 523	56.619 24.909 76.435 1.00 72.53	O
ATOM 1674 OE2 GLU A 523	55.526 26.874 76.438 1.00 69.51	O
ATOM 1675 N HIS A 524	61.659 27.262 76.658 1.00 64.23	N
ATOM 1676 CA HIS A 524	62.914 26.551 76.369 1.00 68.36	C
ATOM 1677 C HIS A 524	64.007 27.149 77.237 1.00 68.67	C
ATOM 1678 O HIS A 524	64.733 26.419 77.903 1.00 66.17	O
ATOM 1679 CB HIS A 524	63.178 26.544 74.894 1.00 71.77	C

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ATOM 1680 CG HIS A 524	64.579 26.275 74.474 1.00 76.25	C
ATOM 1681 ND1 HIS A 524	65.129 26.831 73.329 1.00 77.80	N
ATOM 1682 CD2 HIS A 524	65.544 25.505 75.037 1.00 78.01	C
ATOM 1683 CE1 HIS A 524	66.375 26.406 73.210 1.00 79.59	C
ATOM 1684 NE2 HIS A 524	66.650 25.604 74.228 1.00 80.79	N
ATOM 1685 N LEU A 525	64.000 28.462 77.419 1.00 69.72	N
ATOM 1686 CA LEU A 525	64.976 29.072 78.309 1.00 73.19	C
ATOM 1687 C LEU A 525	64.853 28.613 79.748 1.00 78.52	C
ATOM 1688 O LEU A 525	65.872 28.438 80.422 1.00 78.86	O
ATOM 1689 CB LEU A 525	64.874 30.586 78.208 1.00 69.41	C
ATOM 1690 CG LEU A 525	66.064 31.385 77.682 1.00 65.43	C
ATOM 1691 CD1 LEU A 525	66.814 30.680 76.575 1.00 62.25	C
ATOM 1692 CD2 LEU A 525	65.590 32.752 77.232 1.00 63.11	C
ATOM 1693 N TYR A 526	63.651 28.440 80.291 1.00 85.31	N
ATOM 1694 CA TYR A 526	63.483 28.045 81.682 1.00 90.81	C
ATOM 1695 C TYR A 526	63.638 26.558 81.891 1.00 91.90	C
ATOM 1696 O TYR A 526	64.032 26.161 82.998 1.00 92.38	O
ATOM 1697 CB TYR A 526	62.194 28.564 82.270 1.00 97.06	C
ATOM 1698 CG TYR A 526	62.120 30.071 82.388 1.00 104.66	C
ATOM 1699 CD1 TYR A 526	63.144 30.909 81.961 1.00 106.68	C
ATOM 1700 CD2 TYR A 526	60.990 30.678 82.945 1.00 107.36	C
ATOM 1701 CE1 TYR A 526	63.055 32.271 82.078 1.00 108.14	C
ATOM 1702 CE2 TYR A 526	60.893 32.052 83.067 1.00 109.12	C
ATOM 1703 CZ TYR A 526	61.937 32.845 82.629 1.00 109.89	C
ATOM 1704 OH TYR A 526	61.841 34.218 82.752 1.00 111.92	O
ATOM 1705 N SER A 527	63.511 25.754 80.846 1.00 92.46	N
ATOM 1706 CA SER A 527	63.790 24.328 80.992 1.00 95.45	C
ATOM 1707 C SER A 527	65.289 24.118 81.235 1.00 99.20	C
ATOM 1708 O SER A 527	65.687 23.257 82.013 1.00 100.79	O
ATOM 1709 CB SER A 527	63.296 23.511 79.819 1.00 93.04	C
ATOM 1710 OG SER A 527	63.891 23.821 78.591 1.00 90.22	O
ATOM 1711 N MET A 528	66.130 24.898 80.579 1.00 102.07	N
ATOM 1712 CA MET A 528	67.568 24.846 80.673 1.00 102.85	C
ATOM 1713 C MET A 528	68.047 25.302 82.050 1.00 105.63	C
ATOM 1714 O MET A 528	68.088 24.486 82.976 1.00 108.44	O
ATOM 1715 CB MET A 528	68.203 25.715 79.584 1.00 100.04	C
ATOM 1716 CG MET A 528	68.106 25.183 78.174 1.00 97.06	C
ATOM 1717 SD MET A 528	68.537 26.345 76.869 1.00 93.64	S
ATOM 1718 CE MET A 528	69.354 27.655 77.751 1.00 94.41	C
ATOM 1719 N PRO A 535	63.567 37.472 88.984 1.00 87.02	N
ATOM 1720 CA PRO A 535	64.688 38.390 89.191 1.00 83.59	C
ATOM 1721 C PRO A 535	64.668 39.490 88.133 1.00 77.41	C
ATOM 1722 O PRO A 535	64.982 40.657 88.436 1.00 76.08	O
ATOM 1723 CB PRO A 535	65.996 37.567 89.158 1.00 85.89	C
ATOM 1724 CG PRO A 535	65.508 36.152 89.030 1.00 87.24	C
ATOM 1725 CD PRO A 535	64.069 36.136 88.567 1.00 87.96	C
ATOM 1726 N LEU A 536	64.112 39.148 86.959 1.00 68.79	N
ATOM 1727 CA LEU A 536	64.158 40.084 85.833 1.00 61.48	C
ATOM 1728 C LEU A 536	63.555 41.427 86.201 1.00 56.92	C

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ATOM	1729	O	LEU A 536	64.072	42.485	85.817	1.00	51.92	O
ATOM	1730	CB	LEU A 536	63.499	39.485	84.625	1.00	61.82	C
ATOM	1731	CG	LEU A 536	63.456	40.289	83.359	1.00	61.94	C
ATOM	1732	CD1	LEU A 536	64.733	41.039	83.096	1.00	66.59	C
ATOM	1733	CD2	LEU A 536	63.167	39.343	82.203	1.00	65.06	C
ATOM	1734	N	TYR A 537	62.461	41.317	86.973	1.00	52.04	N
ATOM	1735	CA	TYR A 537	61.734	42.468	87.440	1.00	49.60	C
ATOM	1736	C	TYR A 537	62.672	43.440	88.136	1.00	52.75	C
ATOM	1737	O	TYR A 537	62.753	44.649	87.884	1.00	46.82	O
ATOM	1738	CB	TYR A 537	60.631	42.061	88.410	1.00	46.96	C
ATOM	1739	CG	TYR A 537	59.869	43.265	88.887	1.00	48.55	C
ATOM	1740	CD1	TYR A 537	60.333	44.054	89.909	1.00	51.84	C
ATOM	1741	CD2	TYR A 537	58.668	43.647	88.318	1.00	53.37	C
ATOM	1742	CE1	TYR A 537	59.665	45.180	90.357	1.00	54.70	C
ATOM	1743	CE2	TYR A 537	57.946	44.761	88.732	1.00	54.40	C
ATOM	1744	CZ	TYR A 537	58.468	45.525	89.751	1.00	57.28	C
ATOM	1745	OH	TYR A 537	57.796	46.659	90.174	1.00	60.33	O
ATOM	1746	N	ASP A 538	63.393	42.826	89.102	1.00	58.32	N
ATOM	1747	CA	ASP A 538	64.281	43.628	89.951	1.00	62.64	C
ATOM	1748	C	ASP A 538	65.375	44.203	89.079	1.00	61.73	C
ATOM	1749	O	ASP A 538	65.730	45.378	89.192	1.00	64.00	O
ATOM	1750	CB	ASP A 538	64.775	42.811	91.106	1.00	70.68	C
ATOM	1751	CG	ASP A 538	63.674	42.219	91.974	1.00	75.57	C
ATOM	1752	OD1	ASP A 538	62.509	42.664	91.885	1.00	75.31	O
ATOM	1753	OD2	ASP A 538	64.007	41.294	92.777	1.00	78.95	O
ATOM	1754	N	LEU A 539	65.864	43.356	88.177	1.00	58.42	N
ATOM	1755	CA	LEU A 539	66.891	43.778	87.247	1.00	56.11	C
ATOM	1756	C	LEU A 539	66.464	44.977	86.424	1.00	55.33	C
ATOM	1757	O	LEU A 539	67.198	45.960	86.300	1.00	56.67	O
ATOM	1758	CB	LEU A 539	67.152	42.613	86.314	1.00	59.46	C
ATOM	1759	CG	LEU A 539	68.591	42.098	86.337	1.00	63.12	C
ATOM	1760	CD1	LEU A 539	68.627	40.824	85.472	1.00	66.12	C
ATOM	1761	CD2	LEU A 539	69.575	43.132	85.869	1.00	63.42	C
ATOM	1762	N	LEU A 540	65.286	44.888	85.814	1.00	52.86	N
ATOM	1763	CA	LEU A 540	64.782	45.949	84.965	1.00	50.07	C
ATOM	1764	C	LEU A 540	64.505	47.193	85.780	1.00	50.03	C
ATOM	1765	O	LEU A 540	64.704	48.340	85.350	1.00	45.66	O
ATOM	1766	CB	LEU A 540	63.513	45.418	84.280	1.00	51.61	C
ATOM	1767	CG	LEU A 540	63.707	44.278	83.279	1.00	50.39	C
ATOM	1768	CD1	LEU A 540	62.415	43.605	82.952	1.00	47.32	C
ATOM	1769	CD2	LEU A 540	64.353	44.785	81.982	1.00	52.21	C
ATOM	1770	N	LEU A 541	64.026	46.945	87.007	1.00	52.25	N
ATOM	1771	CA	LEU A 541	63.724	48.073	87.898	1.00	56.18	C
ATOM	1772	C	LEU A 541	65.035	48.788	88.182	1.00	57.88	C
ATOM	1773	O	LEU A 541	65.174	50.004	88.001	1.00	58.33	O
ATOM	1774	CB	LEU A 541	63.083	47.605	89.201	1.00	59.40	C
ATOM	1775	CG	LEU A 541	62.606	48.642	90.209	1.00	59.00	C
ATOM	1776	CD1	LEU A 541	62.558	50.048	89.660	1.00	60.26	C
ATOM	1777	CD2	LEU A 541	61.208	48.296	90.704	1.00	58.85	C

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ATOM 1778 N GLU A 542	66.025	47.944	88.573	1.00	56.65	N
ATOM 1779 CA GLU A 542	67.343	48.545	88.816	1.00	57.17	C
ATOM 1780 C GLU A 542	67.772	49.230	87.534	1.00	58.47	C
ATOM 1781 O GLU A 542	67.976	50.450	87.489	1.00	60.82	O
ATOM 1782 CB GLU A 542	68.331	47.543	89.336	1.00	56.35	C
ATOM 1787 N MET A 543	67.805	48.491	86.424	1.00	57.50	N
ATOM 1788 CA MET A 543	68.200	49.160	85.176	1.00	60.04	C
ATOM 1789 C MET A 543	67.372	50.368	84.796	1.00	59.48	C
ATOM 1790 O MET A 543	67.911	51.423	84.433	1.00	51.56	O
ATOM 1791 CB MET A 543	68.226	48.108	84.077	1.00	62.92	C
ATOM 1792 CG MET A 543	69.541	47.326	84.027	1.00	65.16	C
ATOM 1793 SD MET A 543	69.416	46.065	82.729	1.00	65.51	S
ATOM 1794 CE MET A 543	68.490	44.802	83.540	1.00	63.57	C
ATOM 1795 N LEU A 544	66.019	50.253	84.860	1.00	61.14	N
ATOM 1796 CA LEU A 544	65.209	51.402	84.496	1.00	62.86	C
ATOM 1797 C LEU A 544	65.454	52.572	85.437	1.00	68.07	C
ATOM 1798 O LEU A 544	65.323	53.711	84.983	1.00	66.46	O
ATOM 1799 CB LEU A 544	63.749	51.090	84.425	1.00	61.05	C
ATOM 1800 CG LEU A 544	63.154	50.387	83.217	1.00	58.33	C
ATOM 1801 CD1 LEU A 544	61.836	49.732	83.583	1.00	54.05	C
ATOM 1802 CD2 LEU A 544	62.994	51.351	82.067	1.00	58.50	C
ATOM 1803 N ASP A 545	65.666	52.308	86.735	1.00	75.95	N
ATOM 1804 CA ASP A 545	65.833	53.447	87.631	1.00	84.89	C
ATOM 1805 C ASP A 545	67.189	54.101	87.404	1.00	87.87	C
ATOM 1806 O ASP A 545	67.231	55.336	87.351	1.00	88.95	O
ATOM 1807 CB ASP A 545	65.567	53.176	89.095	1.00	89.55	C
ATOM 1808 CG ASP A 545	64.831	54.302	89.816	1.00	92.87	C
ATOM 1809 OD1 ASP A 545	64.559	55.367	89.211	1.00	93.84	O
ATOM 1810 OD2 ASP A 545	64.502	54.146	91.022	1.00	94.22	O
ATOM 1811 N ALA A 546	68.241	53.319	87.265	1.00	91.11	N
ATOM 1812 CA ALA A 546	69.593	53.826	87.034	1.00	94.05	C
ATOM 1813 C ALA A 546	69.635	54.811	85.873	1.00	95.87	C
ATOM 1814 O ALA A 546	70.073	55.952	86.001	1.00	97.17	O
ATOM 1815 CB ALA A 546	70.548	52.674	86.773	1.00	94.06	C
ATOM 1816 N HIS A 547	69.124	54.397	84.727	1.00	97.69	N
ATOM 1817 CA HIS A 547	68.937	55.242	83.573	1.00	99.06	C
ATOM 1818 C HIS A 547	68.772	56.714	83.958	1.00	98.07	C
ATOM 1819 O HIS A 547	69.164	57.583	83.141	1.00	95.96	O
ATOM 1820 CB HIS A 547	67.659	54.755	82.832	1.00	100.43	C
ATOM 1821 CG HIS A 547	67.688	55.178	81.391	1.00	101.48	C
ATOM 1822 ND1 HIS A 547	66.758	56.004	80.799	1.00	100.77	N
ATOM 1823 CD2 HIS A 547	68.612	54.876	80.435	1.00	101.27	C
ATOM 1824 CE1 HIS A 547	67.106	56.182	79.536	1.00	100.97	C
ATOM 1825 NE2 HIS A 547	68.224	55.513	79.293	1.00	100.81	N
TER 1826 HIS A 547						
HETATM 1827 C1 ACBM A 381	54.836	38.076	80.880	0.50	61.38	C
HETATM 1828 C1 BCBM A 381	53.677	39.033	78.515	0.50	59.49	C
HETATM 1829 C2 ACBM A 381	53.947	39.074	80.147	0.50	58.57	C
HETATM 1830 C2 BCBM A 381	54.097	38.891	79.955	0.50	57.13	C

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HETATM 1831	O1 ACBM A 381	55.146	37.147	79.993	0.50	61.86	O
HETATM 1832	O1 BCBM A 381	53.836	37.907	77.866	0.50	65.26	O
HETATM 1833	O2 ACBM A 381	55.161	38.225	82.036	0.50	62.16	O
HETATM 1834	O2 BCBM A 381	53.285	40.058	78.041	0.50	58.80	O
HETATM 1835	C1 RAL A 600	69.571	36.223	71.917	1.00	31.33	C
HETATM 1836	C2 RAL A 600	69.816	37.448	71.352	1.00	30.47	C
HETATM 1837	C3 RAL A 600	69.083	37.933	70.305	1.00	31.66	C
HETATM 1838	O3 RAL A 600	69.410	39.186	69.850	1.00	32.81	O
HETATM 1839	C4 RAL A 600	68.029	37.167	69.794	1.00	33.99	C
HETATM 1840	C5 RAL A 600	67.765	35.956	70.385	1.00	33.49	C
HETATM 1841	S6 RAL A 600	66.638	34.815	69.986	1.00	33.96	S
HETATM 1842	C7 RAL A 600	67.001	33.691	71.192	1.00	34.48	C
HETATM 1843	C8 RAL A 600	66.347	32.356	71.301	1.00	35.62	C
HETATM 1844	C9 RAL A 600	66.087	31.727	70.099	1.00	35.20	C
HETATM 1845	C10 RAL A 600	65.560	30.446	70.128	1.00	38.32	C
HETATM 1846	C11 RAL A 600	65.259	29.817	71.320	1.00	39.44	C
HETATM 1847	O11 RAL A 600	64.735	28.525	71.249	1.00	46.17	O
HETATM 1848	C12 RAL A 600	65.562	30.428	72.519	1.00	36.17	C
HETATM 1849	C13 RAL A 600	66.106	31.706	72.480	1.00	34.51	C
HETATM 1850	C14 RAL A 600	68.556	35.468	71.464	1.00	31.87	C
HETATM 1851	C15 RAL A 600	68.128	34.150	71.906	1.00	33.10	C
HETATM 1852	C16 RAL A 600	68.771	33.463	72.918	1.00	36.94	C
HETATM 1853	O16 RAL A 600	69.368	32.412	72.653	1.00	40.67	O
HETATM 1854	C17 RAL A 600	68.768	33.917	74.313	1.00	36.96	C
HETATM 1855	C18 RAL A 600	69.621	33.351	75.239	1.00	34.73	C
HETATM 1856	C19 RAL A 600	69.633	33.745	76.563	1.00	34.67	C
HETATM 1857	C20 RAL A 600	68.733	34.725	76.978	1.00	37.20	C
HETATM 1858	C21 RAL A 600	67.879	35.305	76.057	1.00	40.93	C
HETATM 1859	C22 RAL A 600	67.907	34.910	74.730	1.00	39.84	C
HETATM 1860	O23 RAL A 600	68.555	35.259	78.220	1.00	36.45	O
HETATM 1861	C24 RAL A 600	69.461	34.837	79.228	1.00	38.03	C
HETATM 1862	C25 RAL A 600	69.311	35.692	80.458	1.00	43.08	C
HETATM 1863	N26 RAL A 600	69.023	37.110	80.557	1.00	46.61	N
HETATM 1864	C27 RAL A 600	68.720	37.437	81.965	1.00	47.65	C
HETATM 1865	C28 RAL A 600	68.544	38.946	82.229	1.00	48.95	C
HETATM 1866	C29 RAL A 600	67.338	39.404	81.393	1.00	50.06	C
HETATM 1867	C30 RAL A 600	67.804	39.197	79.919	1.00	50.91	C
HETATM 1868	C31 RAL A 600	67.960	37.681	79.707	1.00	50.67	C
ATOM 1869	N LEUB 306	36.674	30.066	44.727	1.00	91.06	N
ATOM 1870	CA LEUB 306	35.325	30.211	45.360	1.00	93.16	C
ATOM 1871	C LEUB 306	35.377	31.143	46.562	1.00	89.78	C
ATOM 1872	O LEUB 306	34.800	32.241	46.512	1.00	87.52	O
ATOM 1873	CB LEUB 306	34.709	28.870	45.748	1.00	97.18	C
ATOM 1874	CG LEUB 306	33.305	28.821	46.303	1.00	101.83	C
ATOM 1875	CD1 LEUB 306	32.367	29.926	45.882	1.00	102.32	C
ATOM 1876	CD2 LEUB 306	32.733	27.433	46.075	1.00	103.20	C
ATOM 1877	N ALA B 307	36.135	30.778	47.577	1.00	87.24	N
ATOM 1878	CA ALA B 307	36.337	31.584	48.780	1.00	84.71	C
ATOM 1879	C ALA B 307	36.798	33.005	48.496	1.00	81.15	C

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ATOM 1880	O ALA B 307	36.351 33.998 49.052 1.00 79.11	O
ATOM 1881	CB ALA B 307	37.375 30.869 49.647 1.00 84.65	C
ATOM 1882	N LEU B 308	37.720 33.138 47.554 1.00 79.38	N
ATOM 1883	CA LEU B 308	38.271 34.398 47.137 1.00 79.21	C
ATOM 1884	C LEU B 308	37.313 35.245 46.327 1.00 76.88	C
ATOM 1885	O LEU B 308	37.604 36.411 46.032 1.00 77.70	O
ATOM 1886	CB LEU B 308	39.555 34.195 46.308 1.00 79.30	C
ATOM 1887	CG LEU B 308	40.709 33.575 47.109 1.00 79.41	C
ATOM 1888	CD1 LEU B 308	41.773 33.104 46.143 1.00 80.23	C
ATOM 1889	CD2 LEU B 308	41.238 34.558 48.122 1.00 78.18	C
ATOM 1890	N SER B 309	36.187 34.682 45.937 1.00 74.71	N
ATOM 1891	CA SER B 309	35.273 35.475 45.127 1.00 74.21	C
ATOM 1892	C SER B 309	34.123 36.021 45.944 1.00 71.62	C
ATOM 1893	O SER B 309	33.357 36.807 45.345 1.00 73.61	O
ATOM 1894	CB SER B 309	34.808 34.691 43.903 1.00 75.74	C
ATOM 1895	OG SER B 309	34.808 33.289 44.133 1.00 76.34	O
ATOM 1896	N LEU B 310	34.013 35.699 47.224 1.00 66.47	N
ATOM 1897	CA LEU B 310	32.894 36.171 48.028 1.00 62.19	C
ATOM 1898	C LEU B 310	32.910 37.665 48.276 1.00 58.57	C
ATOM 1899	O LEU B 310	34.004 38.201 48.315 1.00 58.75	O
ATOM 1900	CB LEU B 310	32.908 35.534 49.430 1.00 60.65	C
ATOM 1901	CG LEU B 310	32.788 34.024 49.475 1.00 58.76	C
ATOM 1902	CD1 LEU B 310	32.907 33.539 50.906 1.00 61.50	C
ATOM 1903	CD2 LEU B 310	31.497 33.570 48.834 1.00 57.77	C
ATOM 1904	N THR B 311	31.763 38.276 48.470 1.00 57.68	N
ATOM 1905	CA THR B 311	31.802 39.704 48.787 1.00 56.79	C
ATOM 1906	C THR B 311	32.008 39.830 50.298 1.00 55.01	C
ATOM 1907	O THR B 311	32.030 38.818 50.985 1.00 52.51	O
ATOM 1908	CB THR B 311	30.554 40.446 48.308 1.00 55.64	C
ATOM 1909	OG1 THR B 311	29.386 39.919 48.896 1.00 54.85	O
ATOM 1910	CG2 THR B 311	30.473 40.352 46.792 1.00 54.89	C
ATOM 1911	N ALA B 312	32.152 41.040 50.812 1.00 53.60	N
ATOM 1912	CA ALA B 312	32.287 41.245 52.256 1.00 49.90	C
ATOM 1913	C ALA B 312	31.033 40.697 52.891 1.00 49.90	C
ATOM 1914	O ALA B 312	31.143 39.803 53.723 1.00 51.10	O
ATOM 1915	CB ALA B 312	32.495 42.684 52.645 1.00 45.67	C
ATOM 1916	N ASP B 313	29.852 41.129 52.428 1.00 52.72	N
ATOM 1917	CA ASP B 313	28.645 40.569 53.019 1.00 56.00	C
ATOM 1918	C ASP B 313	28.443 39.070 52.837 1.00 54.55	C
ATOM 1919	O ASP B 313	27.737 38.533 53.700 1.00 53.64	O
ATOM 1920	CB ASP B 313	27.355 41.243 52.657 1.00 56.17	C
ATOM 1921	CG ASP B 313	27.253 42.696 52.951 1.00 58.96	C
ATOM 1922	OD1 ASP B 313	27.527 43.200 54.061 1.00 58.70	O
ATOM 1923	OD2 ASP B 313	26.891 43.365 51.949 1.00 62.08	O
ATOM 1924	N GLN B 314	28.978 38.417 51.824 1.00 54.51	N
ATOM 1925	CA GLN B 314	28.733 36.979 51.697 1.00 56.64	C
ATOM 1926	C GLN B 314	29.567 36.196 52.694 1.00 55.43	C
ATOM 1927	O GLN B 314	29.141 35.222 53.305 1.00 57.31	O
ATOM 1928	CB GLN B 314	29.002 36.513 50.279 1.00 57.95	C

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ATOM	1929	CG	GLN B 314	28.127	37.253	49.263	1.00	57.78	C
ATOM	1930	CD	GLN B 314	28.553	36.909	47.852	1.00	58.32	C
ATOM	1931	OE1	GLN B 314	29.718	36.910	47.470	1.00	57.50	O
ATOM	1932	NE2	GLN B 314	27.523	36.594	47.098	1.00	60.62	N
ATOM	1933	N	MET B 315	30.754	36.685	52.891	1.00	52.23	N
ATOM	1934	CA	MET B 315	31.739	36.241	53.827	1.00	49.70	C
ATOM	1935	C	MET B 315	31.133	36.254	55.234	1.00	46.39	C
ATOM	1936	O	MET B 315	31.194	35.291	55.998	1.00	41.29	O
ATOM	1937	CB	MET B 315	32.848	37.320	53.756	1.00	52.35	C
ATOM	1938	CG	MET B 315	33.985	37.099	54.749	1.00	54.04	C
ATOM	1939	SD	MET B 315	35.044	35.772	54.203	1.00	56.39	S
ATOM	1940	CE	MET B 315	34.543	34.408	55.191	1.00	56.31	C
ATOM	1941	N	VAL B 316	30.591	37.428	55.579	1.00	42.31	N
ATOM	1942	CA	VAL B 316	29.993	37.536	56.893	1.00	42.79	C
ATOM	1943	C	VAL B 316	28.882	36.517	57.087	1.00	41.54	C
ATOM	1944	O	VAL B 316	28.898	35.860	58.125	1.00	43.23	O
ATOM	1945	CB	VAL B 316	29.401	38.908	57.216	1.00	41.66	C
ATOM	1946	CG1	VAL B 316	28.789	38.844	58.592	1.00	41.71	C
ATOM	1947	CG2	VAL B 316	30.437	39.993	57.108	1.00	44.09	C
ATOM	1948	N	SER B 317	27.937	36.398	56.163	1.00	40.87	N
ATOM	1949	CA	SER B 317	26.845	35.448	56.455	1.00	44.95	C
ATOM	1950	C	SER B 317	27.340	34.030	56.379	1.00	42.50	C
ATOM	1951	O	SER B 317	26.880	33.149	57.086	1.00	42.42	O
ATOM	1952	CB	SER B 317	25.636	35.630	55.554	1.00	46.95	C
ATOM	1953	OG	SER B 317	26.099	35.778	54.245	1.00	51.75	O
ATOM	1954	N	ALA B 318	28.324	33.767	55.504	1.00	40.11	N
ATOM	1955	CA	ALA B 318	28.795	32.377	55.488	1.00	38.46	C
ATOM	1956	C	ALA B 318	29.217	32.030	56.928	1.00	40.51	C
ATOM	1957	O	ALA B 318	28.959	30.989	57.494	1.00	42.17	O
ATOM	1958	CB	ALA B 318	29.920	32.190	54.554	1.00	32.54	C
ATOM	1959	N	LEU B 319	29.968	32.952	57.500	1.00	42.20	N
ATOM	1960	CA	LEU B 319	30.565	32.839	58.786	1.00	39.71	C
ATOM	1961	C	LEU B 319	29.546	32.729	59.904	1.00	40.27	C
ATOM	1962	O	LEU B 319	29.688	31.814	60.716	1.00	37.79	O
ATOM	1963	CB	LEU B 319	31.495	34.038	58.998	1.00	33.71	C
ATOM	1964	CG	LEU B 319	32.768	33.858	58.194	1.00	31.85	C
ATOM	1965	CD1	LEU B 319	33.727	35.029	58.472	1.00	33.62	C
ATOM	1966	CD2	LEU B 319	33.378	32.498	58.401	1.00	26.82	C
ATOM	1967	N	LEU B 320	28.591	33.630	59.877	1.00	41.15	N
ATOM	1968	CA	LEU B 320	27.523	33.694	60.871	1.00	41.53	C
ATOM	1969	C	LEU B 320	26.745	32.394	60.833	1.00	45.93	C
ATOM	1970	O	LEU B 320	26.314	31.873	61.869	1.00	49.20	O
ATOM	1971	CB	LEU B 320	26.591	34.866	60.594	1.00	36.95	C
ATOM	1972	CG	LEU B 320	27.082	36.214	61.131	1.00	37.97	C
ATOM	1973	CD1	LEU B 320	26.133	37.337	60.825	1.00	33.54	C
ATOM	1974	CD2	LEU B 320	27.335	36.118	62.636	1.00	35.35	C
ATOM	1975	N	ASP B 321	26.663	31.823	59.644	1.00	47.02	N
ATOM	1976	CA	ASP B 321	26.010	30.577	59.440	1.00	50.66	C
ATOM	1977	C	ASP B 321	26.740	29.406	60.030	1.00	46.60	C

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ATOM	1978	O	ASP B 321	26.147	28.446	60.485	1.00	51.45	O
ATOM	1979	CB	ASP B 321	25.910	30.237	57.913	1.00	59.17	C
ATOM	1980	CG	ASP B 321	24.471	29.735	57.741	1.00	63.60	C
ATOM	1981	OD1	ASP B 321	23.615	30.631	57.906	1.00	64.90	O
ATOM	1982	OD2	ASP B 321	24.323	28.523	57.513	1.00	66.90	O
ATOM	1983	N	ALA B 322	28.047	29.471	59.990	1.00	42.04	N
ATOM	1984	CA	ALA B 322	28.884	28.383	60.486	1.00	36.20	C
ATOM	1985	C	ALA B 322	28.984	28.376	62.001	1.00	35.08	C
ATOM	1986	O	ALA B 322	29.589	27.470	62.602	1.00	35.33	O
ATOM	1987	CB	ALA B 322	30.218	28.587	59.801	1.00	32.90	C
ATOM	1988	N	GLU B 323	28.408	29.360	62.682	1.00	32.18	N
ATOM	1989	CA	GLU B 323	28.626	29.441	64.129	1.00	35.05	C
ATOM	1990	C	GLU B 323	28.277	28.150	64.784	1.00	36.48	C
ATOM	1991	O	GLU B 323	27.266	27.585	64.370	1.00	44.88	O
ATOM	1992	CB	GLU B 323	27.842	30.599	64.703	1.00	32.26	C
ATOM	1993	CG	GLU B 323	28.693	31.894	64.759	1.00	35.65	C
ATOM	1994	CD	GLU B 323	29.907	31.568	65.638	1.00	37.28	C
ATOM	1995	OE1	GLU B 323	30.881	31.084	65.044	1.00	37.53	O
ATOM	1996	OE2	GLU B 323	29.839	31.721	66.859	1.00	37.73	O
ATOM	1997	N	PRO B 324	29.069	27.613	65.654	1.00	37.32	N
ATOM	1998	CA	PRO B 324	28.686	26.397	66.368	1.00	37.09	C
ATOM	1999	C	PRO B 324	27.625	26.817	67.394	1.00	36.18	C
ATOM	2000	O	PRO B 324	27.445	27.974	67.725	1.00	35.69	O
ATOM	2001	CB	PRO B 324	29.926	25.912	67.120	1.00	36.62	C
ATOM	2002	CG	PRO B 324	30.795	27.125	67.154	1.00	35.28	C
ATOM	2003	CD	PRO B 324	30.285	28.185	66.199	1.00	37.93	C
ATOM	2004	N	PRO B 325	26.908	25.840	67.912	1.00	34.12	N
ATOM	2005	CA	PRO B 325	25.909	26.004	68.921	1.00	31.43	C
ATOM	2006	C	PRO B 325	26.534	26.311	70.288	1.00	35.00	C
ATOM	2007	O	PRO B 325	27.600	25.746	70.553	1.00	37.48	O
ATOM	2008	CB	PRO B 325	25.267	24.601	69.046	1.00	31.52	C
ATOM	2009	CG	PRO B 325	26.275	23.689	68.477	1.00	30.29	C
ATOM	2010	CD	PRO B 325	27.141	24.441	67.507	1.00	32.36	C
ATOM	2011	N	ILE B 326	25.929	27.031	71.231	1.00	35.84	N
ATOM	2012	CA	ILE B 326	26.567	27.139	72.555	1.00	36.70	C
ATOM	2013	C	ILE B 326	26.240	25.913	73.382	1.00	38.88	C
ATOM	2014	O	ILE B 326	25.058	25.724	73.698	1.00	42.79	O
ATOM	2015	CB	ILE B 326	26.123	28.433	73.253	1.00	37.21	C
ATOM	2016	CG1	ILE B 326	26.777	29.593	72.434	1.00	35.81	C
ATOM	2017	CG2	ILE B 326	26.616	28.473	74.693	1.00	32.67	C
ATOM	2018	CD1	ILE B 326	26.211	30.920	72.862	1.00	41.70	C
ATOM	2019	N	LEU B 327	27.179	25.020	73.679	1.00	35.51	N
ATOM	2020	CA	LEU B 327	26.891	23.820	74.412	1.00	30.60	C
ATOM	2021	C	LEU B 327	26.734	24.065	75.899	1.00	35.93	C
ATOM	2022	O	LEU B 327	27.083	25.118	76.388	1.00	38.14	O
ATOM	2023	CB	LEU B 327	28.035	22.821	74.220	1.00	30.41	C
ATOM	2024	CG	LEU B 327	28.381	22.392	72.828	1.00	30.34	C
ATOM	2025	CD1	LEU B 327	29.265	21.155	72.855	1.00	31.40	C
ATOM	2026	CD2	LEU B 327	27.149	22.038	71.986	1.00	33.00	C

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ATOM	2027	N	TYR B 328	26.248	23.082	76.662	1.00	38.95	N
ATOM	2028	CA	TYR B 328	26.048	23.110	78.065	1.00	39.09	C
ATOM	2029	C	TYR B 328	26.937	22.118	78.795	1.00	40.90	C
ATOM	2030	O	TYR B 328	27.340	21.115	78.209	1.00	37.06	O
ATOM	2031	CB	TYR B 328	24.637	22.721	78.470	1.00	43.01	C
ATOM	2032	CG	TYR B 328	23.637	23.835	78.325	1.00	45.81	C
ATOM	2033	CD1	TYR B 328	23.193	24.252	77.073	1.00	43.80	C
ATOM	2034	CD2	TYR B 328	23.148	24.465	79.472	1.00	46.54	C
ATOM	2035	CE1	TYR B 328	22.264	25.251	76.964	1.00	44.96	C
ATOM	2036	CE2	TYR B 328	22.222	25.499	79.356	1.00	45.50	C
ATOM	2037	CZ	TYR B 328	21.799	25.880	78.103	1.00	46.55	C
ATOM	2038	OH	TYR B 328	20.868	26.894	77.991	1.00	48.51	O
ATOM	2039	N	SER B 329	27.188	22.518	80.048	1.00	45.16	N
ATOM	2040	CA	SER B 329	28.030	21.679	80.884	1.00	50.48	C
ATOM	2041	C	SER B 329	27.211	20.428	81.217	1.00	53.86	C
ATOM	2042	O	SER B 329	26.079	20.598	81.626	1.00	55.54	O
ATOM	2043	CB	SER B 329	28.437	22.309	82.217	1.00	47.00	C
ATOM	2044	OG	SER B 329	29.422	21.345	82.720	1.00	47.21	O
ATOM	2045	N	GLU B 330	27.732	19.283	81.042	1.00	59.98	N
ATOM	2046	CA	GLU B 330	26.998	18.042	81.324	1.00	70.19	C
ATOM	2047	C	GLU B 330	27.154	17.795	82.810	1.00	76.09	C
ATOM	2048	O	GLU B 330	28.098	17.104	83.179	1.00	78.83	O
ATOM	2049	CB	GLU B 330	27.633	16.977	80.487	1.00	72.08	C
ATOM	2050	CG	GLU B 330	26.915	15.690	80.194	1.00	74.06	C
ATOM	2051	CD	GLU B 330	27.861	14.891	79.282	1.00	76.03	C
ATOM	2052	OE1	GLU B 330	28.322	15.500	78.291	1.00	77.49	O
ATOM	2053	OE2	GLU B 330	28.109	13.726	79.613	1.00	76.55	O
ATOM	2054	N	TYR B 331	26.292	18.399	83.607	1.00	83.66	N
ATOM	2055	CA	TYR B 331	26.452	18.272	85.060	1.00	91.44	C
ATOM	2056	C	TYR B 331	25.131	18.314	85.781	1.00	92.28	C
ATOM	2057	O	TYR B 331	25.037	18.634	86.965	1.00	93.86	O
ATOM	2058	CB	TYR B 331	27.466	19.336	85.469	1.00	97.13	C
ATOM	2059	CG	TYR B 331	27.069	20.568	86.213	1.00	101.71	C
ATOM	2060	CD1	TYR B 331	26.608	21.704	85.561	1.00	103.32	C
ATOM	2061	CD2	TYR B 331	27.178	20.619	87.608	1.00	104.18	C
ATOM	2062	CE1	TYR B 331	26.226	22.828	86.263	1.00	105.97	C
ATOM	2063	CE2	TYR B 331	26.828	21.752	88.324	1.00	106.55	C
ATOM	2064	CZ	TYR B 331	26.347	22.858	87.642	1.00	107.31	C
ATOM	2065	OH	TYR B 331	25.995	24.000	88.323	1.00	107.29	O
ATOM	2066	N	ALA B 340	39.286	16.946	89.923	1.00	93.98	N
ATOM	2067	CA	ALA B 340	38.917	16.738	88.521	1.00	93.62	C
ATOM	2068	C	ALA B 340	37.402	16.787	88.327	1.00	90.09	C
ATOM	2069	O	ALA B 340	36.868	16.237	87.370	1.00	90.38	O
ATOM	2070	CB	ALA B 340	39.519	15.472	87.926	1.00	94.53	C
ATOM	2071	N	SER B 341	36.706	17.458	89.239	1.00	85.89	N
ATOM	2072	CA	SER B 341	35.276	17.676	89.073	1.00	82.06	C
ATOM	2073	C	SER B 341	35.174	18.844	88.061	1.00	78.61	C
ATOM	2074	O	SER B 341	34.785	18.752	86.908	1.00	80.07	O
ATOM	2075	CB	SER B 341	34.610	18.188	90.341	1.00	83.38	C

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ATOM 2076	OG SER B 341	35.256 19.414 90.728 1.00 85.02	O
ATOM 2077	N MET B 342	35.722 19.964 88.528 1.00 71.83	N
ATOM 2078	CA MET B 342	35.738 21.170 87.702 1.00 67.11	C
ATOM 2079	C MET B 342	36.582 20.918 86.469 1.00 62.56	C
ATOM 2080	O MET B 342	36.233 21.329 85.369 1.00 62.00	O
ATOM 2081	CB MET B 342	36.320 22.295 88.511 1.00 71.06	C
ATOM 2082	CG MET B 342	36.550 23.547 87.695 1.00 76.61	C
ATOM 2083	SD MET B 342	36.328 24.989 88.764 1.00 82.30	S
ATOM 2084	CE MET B 342	37.859 25.853 88.353 1.00 81.45	C
ATOM 2085	N MET B 343	37.682 20.186 86.669 1.00 58.18	N
ATOM 2086	CA MET B 343	38.521 19.887 85.520 1.00 57.17	C
ATOM 2087	C MET B 343	37.765 18.915 84.625 1.00 53.51	C
ATOM 2088	O MET B 343	37.989 18.950 83.422 1.00 54.37	O
ATOM 2089	CB MET B 343	39.915 19.428 85.885 1.00 60.29	C
ATOM 2090	CG MET B 343	40.925 20.583 85.969 1.00 64.87	C
ATOM 2091	SD MET B 343	40.885 21.649 84.487 1.00 70.97	S
ATOM 2092	CE MET B 343	41.239 20.401 83.224 1.00 67.55	C
ATOM 2093	N GLY B 344	36.877 18.128 85.204 1.00 50.03	N
ATOM 2094	CA GLY B 344	36.100 17.109 84.489 1.00 45.01	C
ATOM 2095	C GLY B 344	35.089 17.784 83.576 1.00 44.23	C
ATOM 2096	O GLY B 344	35.007 17.591 82.362 1.00 44.89	O
ATOM 2097	N LEU B 345	34.395 18.715 84.226 1.00 41.93	N
ATOM 2098	CA LEU B 345	33.397 19.513 83.562 1.00 42.59	C
ATOM 2099	C LEU B 345	33.964 20.248 82.346 1.00 43.04	C
ATOM 2100	O LEU B 345	33.393 20.250 81.229 1.00 40.37	O
ATOM 2101	CB LEU B 345	32.765 20.451 84.561 1.00 43.09	C
ATOM 2102	CG LEU B 345	31.689 19.949 85.523 1.00 44.77	C
ATOM 2103	CD1 LEU B 345	30.750 21.109 85.884 1.00 42.87	C
ATOM 2104	CD2 LEU B 345	30.825 18.815 84.964 1.00 43.41	C
ATOM 2105	N LEU B 346	35.112 20.870 82.544 1.00 41.05	N
ATOM 2106	CA LEU B 346	35.738 21.616 81.445 1.00 40.63	C
ATOM 2107	C LEU B 346	36.303 20.717 80.373 1.00 39.43	C
ATOM 2108	O LEU B 346	36.259 21.034 79.158 1.00 38.60	O
ATOM 2109	CB LEU B 346	36.802 22.539 82.083 1.00 40.84	C
ATOM 2110	CG LEU B 346	36.140 23.535 83.040 1.00 40.19	C
ATOM 2111	CD1 LEU B 346	37.202 24.319 83.759 1.00 40.76	C
ATOM 2112	CD2 LEU B 346	35.106 24.415 82.336 1.00 37.83	C
ATOM 2113	N THR B 347	36.709 19.510 80.739 1.00 38.21	N
ATOM 2114	CA THR B 347	37.285 18.607 79.711 1.00 38.77	C
ATOM 2115	C THR B 347	36.175 18.060 78.878 1.00 39.07	C
ATOM 2116	O THR B 347	36.273 17.880 77.679 1.00 41.54	O
ATOM 2117	CB THR B 347	38.055 17.505 80.445 1.00 35.92	C
ATOM 2118	OG1 THR B 347	38.912 18.218 81.351 1.00 38.30	O
ATOM 2119	CG2 THR B 347	38.918 16.662 79.577 1.00 35.35	C
ATOM 2120	N ASN B 348	35.066 17.774 79.565 1.00 42.21	N
ATOM 2121	CA ASN B 348	33.930 17.197 78.816 1.00 40.77	C
ATOM 2122	C ASN B 348	33.447 18.316 77.893 1.00 37.78	C
ATOM 2123	O ASN B 348	33.306 18.016 76.707 1.00 41.02	O
ATOM 2124	CB ASN B 348	32.835 16.674 79.718 1.00 46.33	C

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ATOM	2125	CG	ASN B 348	31.520	16.383	79.001	1.00	51.96	C
ATOM	2126	OD1	ASN B 348	30.602	17.221	78.908	1.00	52.64	O
ATOM	2127	ND2	ASN B 348	31.433	15.163	78.479	1.00	51.20	N
ATOM	2128	N	LEU B 349	33.299	19.528	78.419	1.00	30.31	N
ATOM	2129	CA	LEU B 349	32.799	20.607	77.573	1.00	29.21	C
ATOM	2130	C	LEU B 349	33.723	20.817	76.395	1.00	32.93	C
ATOM	2131	O	LEU B 349	33.316	20.771	75.238	1.00	35.94	O
ATOM	2132	CB	LEU B 349	32.707	21.892	78.338	1.00	29.76	C
ATOM	2133	CG	LEU B 349	32.108	23.101	77.683	1.00	35.00	C
ATOM	2134	CD1	LEU B 349	30.588	22.944	77.517	1.00	33.38	C
ATOM	2135	CD2	LEU B 349	32.362	24.338	78.579	1.00	35.75	C
ATOM	2136	N	ALA B 350	35.013	20.996	76.691	1.00	34.23	N
ATOM	2137	CA	ALA B 350	35.962	21.247	75.614	1.00	34.53	C
ATOM	2138	C	ALA B 350	35.847	20.144	74.578	1.00	36.53	C
ATOM	2139	O	ALA B 350	35.699	20.398	73.370	1.00	35.61	O
ATOM	2140	CB	ALA B 350	37.360	21.398	76.156	1.00	32.66	C
ATOM	2141	N	ASP B 351	35.831	18.898	75.066	1.00	38.71	N
ATOM	2142	CA	ASP B 351	35.776	17.799	74.099	1.00	42.30	C
ATOM	2143	C	ASP B 351	34.566	17.850	73.208	1.00	40.32	C
ATOM	2144	O	ASP B 351	34.662	17.641	72.001	1.00	40.47	O
ATOM	2145	CB	ASP B 351	35.867	16.455	74.810	1.00	47.91	C
ATOM	2146	CG	ASP B 351	37.312	16.266	75.247	1.00	53.28	C
ATOM	2147	OD1	ASP B 351	38.180	17.030	74.775	1.00	54.83	O
ATOM	2148	OD2	ASP B 351	37.559	15.373	76.068	1.00	58.03	O
ATOM	2149	N	ARG B 352	33.396	18.105	73.827	1.00	37.27	N
ATOM	2150	CA	ARG B 352	32.238	18.116	72.922	1.00	35.47	C
ATOM	2151	C	ARG B 352	32.361	19.345	72.023	1.00	37.99	C
ATOM	2152	O	ARG B 352	32.053	19.283	70.820	1.00	41.73	O
ATOM	2153	CB	ARG B 352	30.968	18.054	73.707	1.00	35.39	C
ATOM	2154	CG	ARG B 352	30.607	16.789	74.454	1.00	32.18	C
ATOM	2155	CD	ARG B 352	29.307	17.094	75.240	1.00	29.02	C
ATOM	2156	NE	ARG B 352	29.643	17.690	76.546	1.00	33.40	N
ATOM	2157	CZ	ARG B 352	29.011	18.751	77.034	1.00	33.61	C
ATOM	2158	NH1	ARG B 352	28.053	19.340	76.302	1.00	38.66	N
ATOM	2159	NH2	ARG B 352	29.293	19.267	78.202	1.00	29.18	N
ATOM	2160	N	GLU B 353	32.829	20.505	72.514	1.00	37.04	N
ATOM	2161	CA	GLU B 353	32.953	21.662	71.610	1.00	33.47	C
ATOM	2162	C	GLU B 353	33.853	21.307	70.454	1.00	33.75	C
ATOM	2163	O	GLU B 353	33.541	21.615	69.304	1.00	35.20	O
ATOM	2164	CB	GLU B 353	33.469	22.926	72.270	1.00	29.42	C
ATOM	2165	CG	GLU B 353	32.480	23.439	73.313	1.00	26.50	C
ATOM	2166	CD	GLU B 353	33.075	24.676	73.955	1.00	28.29	C
ATOM	2167	OE1	GLU B 353	33.896	24.580	74.879	1.00	27.96	O
ATOM	2168	OE2	GLU B 353	32.675	25.741	73.510	1.00	26.56	O
ATOM	2169	N	LEU B 354	34.952	20.602	70.736	1.00	32.54	N
ATOM	2170	CA	LEU B 354	35.825	20.281	69.607	1.00	34.55	C
ATOM	2171	C	LEU B 354	35.050	19.760	68.414	1.00	35.37	C
ATOM	2172	O	LEU B 354	35.208	20.264	67.313	1.00	39.61	O
ATOM	2173	CB	LEU B 354	36.872	19.263	69.987	1.00	38.77	C

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ATOM	2174	CG LEU B 354	38.112	19.277	69.079	1.00	40.25	C
ATOM	2175	CD1 LEU B 354	38.888	20.553	69.330	1.00	40.98	C
ATOM	2176	CD2 LEU B 354	38.934	18.058	69.437	1.00	43.28	C
ATOM	2177	N VAL B 355	34.219	18.762	68.636	1.00	35.46	N
ATOM	2178	CA VAL B 355	33.389	18.187	67.594	1.00	32.70	C
ATOM	2179	C VAL B 355	32.724	19.268	66.804	1.00	31.65	C
ATOM	2180	O VAL B 355	32.892	19.255	65.574	1.00	32.02	O
ATOM	2181	CB VAL B 355	32.399	17.122	68.125	1.00	32.66	C
ATOM	2182	CG1 VAL B 355	31.995	16.136	67.047	1.00	26.92	C
ATOM	2183	CG2 VAL B 355	33.028	16.382	69.307	1.00	25.01	C
ATOM	2184	N HIS B 356	32.087	20.275	67.394	1.00	34.15	N
ATOM	2185	CA HIS B 356	31.486	21.287	66.493	1.00	34.59	C
ATOM	2186	C HIS B 356	32.530	22.149	65.832	1.00	37.56	C
ATOM	2187	O HIS B 356	32.354	22.714	64.744	1.00	38.79	O
ATOM	2188	CB HIS B 356	30.480	22.107	67.246	1.00	34.49	C
ATOM	2189	CG HIS B 356	29.324	21.312	67.725	1.00	40.09	C
ATOM	2190	ND1 HIS B 356	28.066	21.381	67.153	1.00	44.40	N
ATOM	2191	CD2 HIS B 356	29.210	20.421	68.739	1.00	40.60	C
ATOM	2192	CE1 HIS B 356	27.241	20.579	67.822	1.00	41.93	C
ATOM	2193	NE2 HIS B 356	27.922	19.997	68.777	1.00	37.83	N
ATOM	2194	N MET B 357	33.672	22.346	66.516	1.00	37.31	N
ATOM	2195	CA MET B 357	34.682	23.215	65.925	1.00	38.07	C
ATOM	2196	C MET B 357	35.101	22.679	64.580	1.00	41.54	C
ATOM	2197	O MET B 357	35.124	23.450	63.583	1.00	41.83	O
ATOM	2198	CB MET B 357	35.810	23.498	66.856	1.00	37.53	C
ATOM	2199	CG MET B 357	36.864	24.488	66.303	1.00	30.25	C
ATOM	2200	SD MET B 357	38.352	24.187	67.330	1.00	30.19	S
ATOM	2201	CE MET B 357	37.696	24.723	68.915	1.00	28.24	C
ATOM	2202	N ILE B 358	35.353	21.355	64.544	1.00	42.44	N
ATOM	2203	CA ILE B 358	35.699	20.776	63.223	1.00	43.14	C
ATOM	2204	C ILE B 358	34.653	21.154	62.193	1.00	46.72	C
ATOM	2205	O ILE B 358	34.983	21.635	61.101	1.00	52.28	O
ATOM	2206	CB ILE B 358	35.840	19.281	63.300	1.00	42.42	C
ATOM	2207	CG1 ILE B 358	37.135	18.967	64.079	1.00	46.81	C
ATOM	2208	CG2 ILE B 358	35.887	18.759	61.889	1.00	42.41	C
ATOM	2209	CD1 ILE B 358	36.947	18.055	65.259	1.00	46.45	C
ATOM	2210	N ASN B 359	33.390	21.007	62.489	1.00	43.50	N
ATOM	2211	CA ASN B 359	32.324	21.393	61.614	1.00	43.97	C
ATOM	2212	C ASN B 359	32.304	22.818	61.160	1.00	42.64	C
ATOM	2213	O ASN B 359	31.882	23.218	60.070	1.00	44.83	O
ATOM	2214	CB ASN B 359	31.034	21.220	62.506	1.00	50.82	C
ATOM	2215	CG ASN B 359	30.195	20.333	61.582	1.00	55.66	C
ATOM	2216	OD1 ASN B 359	30.634	19.185	61.414	1.00	58.73	O
ATOM	2217	ND2 ASN B 359	29.267	21.097	61.045	1.00	57.02	N
ATOM	2218	N TRP B 360	32.568	23.712	62.124	1.00	41.26	N
ATOM	2219	CA TRP B 360	32.554	25.144	61.754	1.00	36.74	C
ATOM	2220	C TRP B 360	33.823	25.302	60.902	1.00	37.96	C
ATOM	2221	O TRP B 360	33.742	25.874	59.855	1.00	38.33	O
ATOM	2222	CB TRP B 360	32.527	25.956	63.008	1.00	31.88	C

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ATOM	2223	CG	TRP B 360	33.266	27.248	62.885	1.00	31.31	C
ATOM	2224	CD1	TRP B 360	32.726	28.432	62.489	1.00	30.14	C
ATOM	2225	CD2	TRP B 360	34.656	27.477	63.095	1.00	27.29	C
ATOM	2226	NE1	TRP B 360	33.690	29.405	62.477	1.00	28.74	N
ATOM	2227	CE2	TRP B 360	34.887	28.837	62.861	1.00	28.25	C
ATOM	2228	CE3	TRP B 360	35.721	26.680	63.511	1.00	28.20	C
ATOM	2229	CZ2	TRP B 360	36.130	29.430	63.024	1.00	24.96	C
ATOM	2230	CZ3	TRP B 360	36.960	27.283	63.666	1.00	27.77	C
ATOM	2231	CH2	TRP B 360	37.152	28.642	63.395	1.00	25.71	C
ATOM	2232	N	ALA B 361	34.937	24.709	61.298	1.00	39.67	N
ATOM	2233	CA	ALA B 361	36.185	24.796	60.527	1.00	43.20	C
ATOM	2234	C	ALA B 361	35.935	24.626	59.036	1.00	42.09	C
ATOM	2235	O	ALA B 361	36.251	25.465	58.184	1.00	37.43	O
ATOM	2236	CB	ALA B 361	37.143	23.729	61.106	1.00	42.72	C
ATOM	2237	N	LYS B 362	35.254	23.526	58.685	1.00	43.79	N
ATOM	2238	CA	LYS B 362	34.880	23.171	57.339	1.00	44.31	C
ATOM	2239	C	LYS B 362	34.013	24.211	56.671	1.00	43.19	C
ATOM	2240	O	LYS B 362	33.967	24.256	55.448	1.00	46.74	O
ATOM	2241	CB	LYS B 362	34.254	21.793	57.234	1.00	44.89	C
ATOM	2242	CG	LYS B 362	35.116	20.662	57.747	1.00	47.52	C
ATOM	2243	CD	LYS B 362	36.192	20.357	56.692	1.00	53.22	C
ATOM	2244	CE	LYS B 362	36.618	18.891	56.666	1.00	55.05	C
ATOM	2245	NZ	LYS B 362	37.853	18.714	55.815	1.00	58.66	N
ATOM	2246	N	ARG B 363	33.436	25.182	57.330	1.00	44.77	N
ATOM	2247	CA	ARG B 363	32.688	26.238	56.688	1.00	46.46	C
ATOM	2248	C	ARG B 363	33.447	27.545	56.666	1.00	47.06	C
ATOM	2249	O	ARG B 363	32.952	28.594	56.190	1.00	47.77	O
ATOM	2250	CB	ARG B 363	31.285	26.352	57.252	1.00	51.47	C
ATOM	2251	CG	ARG B 363	30.599	24.978	57.257	1.00	57.74	C
ATOM	2252	CD	ARG B 363	29.144	25.078	57.571	1.00	63.24	C
ATOM	2253	NE	ARG B 363	28.714	24.274	58.675	1.00	72.16	N
ATOM	2254	CZ	ARG B 363	27.641	24.366	59.454	1.00	77.17	C
ATOM	2255	NH1	ARG B 363	26.690	25.290	59.359	1.00	78.21	N
ATOM	2256	NH2	ARG B 363	27.503	23.448	60.423	1.00	78.39	N
ATOM	2257	N	VAL B 364	34.701	27.524	57.115	1.00	43.37	N
ATOM	2258	CA	VAL B 364	35.437	28.786	56.962	1.00	46.62	C
ATOM	2259	C	VAL B 364	35.978	28.824	55.552	1.00	51.16	C
ATOM	2260	O	VAL B 364	36.718	27.947	55.063	1.00	53.83	O
ATOM	2261	CB	VAL B 364	36.455	28.883	58.101	1.00	45.62	C
ATOM	2262	CG1	VAL B 364	37.501	29.930	57.814	1.00	40.24	C
ATOM	2263	CG2	VAL B 364	35.697	29.179	59.395	1.00	41.67	C
ATOM	2264	N	PRO B 365	35.581	29.804	54.781	1.00	54.29	N
ATOM	2265	CA	PRO B 365	36.002	30.007	53.408	1.00	54.11	C
ATOM	2266	C	PRO B 365	37.505	29.941	53.286	1.00	56.48	C
ATOM	2267	O	PRO B 365	38.258	30.675	53.911	1.00	57.71	O
ATOM	2268	CB	PRO B 365	35.484	31.391	52.999	1.00	55.74	C
ATOM	2269	CG	PRO B 365	34.239	31.482	53.865	1.00	56.60	C
ATOM	2270	CD	PRO B 365	34.660	30.870	55.221	1.00	57.46	C
ATOM	2271	N	GLY B 366	37.968	28.989	52.492	1.00	59.01	N

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ATOM	2272	CA	GLY B 366	39.367	28.719	52.206	1.00	56.53	C
ATOM	2273	C	GLY B 366	39.814	27.449	52.896	1.00	56.39	C
ATOM	2274	O	GLY B 366	40.701	26.721	52.453	1.00	57.87	O
ATOM	2275	N	PHE B 367	39.185	27.178	54.044	1.00	54.29	N
ATOM	2276	CA	PHE B 367	39.568	26.030	54.829	1.00	51.31	C
ATOM	2277	C	PHE B 367	39.509	24.725	54.071	1.00	51.54	C
ATOM	2278	O	PHE B 367	40.379	23.888	54.307	1.00	55.10	O
ATOM	2279	CB	PHE B 367	38.689	25.855	56.102	1.00	45.65	C
ATOM	2280	CG	PHE B 367	39.438	24.995	57.091	1.00	41.76	C
ATOM	2281	CD1	PHE B 367	40.589	25.494	57.707	1.00	40.04	C
ATOM	2282	CD2	PHE B 367	39.023	23.713	57.375	1.00	38.51	C
ATOM	2283	CE1	PHE B 367	41.273	24.731	58.636	1.00	37.07	C
ATOM	2284	CE2	PHE B 367	39.717	22.963	58.321	1.00	36.35	C
ATOM	2285	CZ	PHE B 367	40.834	23.460	58.936	1.00	33.86	C
ATOM	2286	N	VAL B 368	38.474	24.480	53.298	1.00	52.13	N
ATOM	2287	CA	VAL B 368	38.363	23.114	52.736	1.00	54.30	C
ATOM	2288	C	VAL B 368	39.143	22.975	51.486	1.00	57.80	C
ATOM	2289	O	VAL B 368	39.401	21.869	50.998	1.00	63.60	O
ATOM	2290	CB	VAL B 368	36.907	22.637	52.764	1.00	53.61	C
ATOM	2291	CG1	VAL B 368	36.182	22.937	51.495	1.00	47.24	C
ATOM	2292	CG2	VAL B 368	36.822	21.182	53.236	1.00	53.23	C
ATOM	2293	N	ASP B 369	39.682	24.036	50.920	1.00	59.22	N
ATOM	2294	CA	ASP B 369	40.571	24.101	49.792	1.00	59.42	C
ATOM	2295	C	ASP B 369	41.975	23.618	50.187	1.00	61.08	C
ATOM	2296	O	ASP B 369	42.917	23.513	49.408	1.00	65.57	O
ATOM	2297	CB	ASP B 369	40.764	25.614	49.507	1.00	60.75	C
ATOM	2298	CG	ASP B 369	39.544	26.116	48.756	1.00	62.62	C
ATOM	2299	OD1	ASP B 369	38.792	25.215	48.325	1.00	64.13	O
ATOM	2300	OD2	ASP B 369	39.395	27.336	48.564	1.00	62.51	O
ATOM	2301	N	LEU B 370	42.173	23.356	51.457	1.00	57.11	N
ATOM	2302	CA	LEU B 370	43.421	22.936	51.990	1.00	56.49	C
ATOM	2303	C	LEU B 370	43.455	21.412	52.023	1.00	57.13	C
ATOM	2304	O	LEU B 370	42.388	20.842	52.060	1.00	59.40	O
ATOM	2305	CB	LEU B 370	43.514	23.456	53.430	1.00	55.70	C
ATOM	2306	CG	LEU B 370	43.789	24.926	53.676	1.00	52.48	C
ATOM	2307	CD1	LEU B 370	44.811	25.033	54.778	1.00	52.72	C
ATOM	2308	CD2	LEU B 370	44.290	25.641	52.439	1.00	54.40	C
ATOM	2309	N	THR B 371	44.648	20.857	52.022	1.00	56.95	N
ATOM	2310	CA	THR B 371	44.804	19.440	52.137	1.00	57.71	C
ATOM	2311	C	THR B 371	44.344	19.082	53.556	1.00	58.84	C
ATOM	2312	O	THR B 371	44.392	19.912	54.471	1.00	58.64	O
ATOM	2313	CB	THR B 371	46.257	18.949	51.967	1.00	59.95	C
ATOM	2314	OG1	THR B 371	47.063	19.177	53.118	1.00	58.30	O
ATOM	2315	CG2	THR B 371	46.924	19.573	50.745	1.00	60.40	C
ATOM	2316	N	LEU B 372	43.993	17.828	53.732	1.00	60.21	N
ATOM	2317	CA	LEU B 372	43.598	17.318	55.034	1.00	62.03	C
ATOM	2318	C	LEU B 372	44.728	17.567	56.026	1.00	63.78	C
ATOM	2319	O	LEU B 372	44.474	18.069	57.134	1.00	66.06	O
ATOM	2320	CB	LEU B 372	43.218	15.852	54.890	1.00	62.64	C

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ATOM	2321	CG LEU B 372	42.780	15.076	56.117	1.00	66.44	C
ATOM	2322	CD1 LEU B 372	41.896	15.921	57.053	1.00	64.82	C
ATOM	2323	CD2 LEU B 372	42.018	13.815	55.715	1.00	67.73	C
ATOM	2324	N HIS B 373	45.992	17.295	55.677	1.00	64.79	N
ATOM	2325	CA HIS B 373	47.067	17.517	56.603	1.00	66.99	C
ATOM	2326	C HIS B 373	47.115	18.970	57.044	1.00	61.47	C
ATOM	2327	O HIS B 373	47.443	19.187	58.196	1.00	59.54	O
ATOM	2328	CB HIS B 373	48.496	17.289	56.089	1.00	76.41	C
ATOM	2329	CG HIS B 373	48.547	15.901	55.537	1.00	87.82	C
ATOM	2330	ND1 HIS B 373	47.917	14.825	56.131	1.00	89.75	N
ATOM	2331	CD2 HIS B 373	49.156	15.441	54.408	1.00	93.11	C
ATOM	2332	CE1 HIS B 373	48.126	13.744	55.408	1.00	92.37	C
ATOM	2333	NE2 HIS B 373	48.876	14.081	54.357	1.00	95.93	N
ATOM	2334	N ASP B 374	46.952	19.840	56.063	1.00	55.09	N
ATOM	2335	CA ASP B 374	46.990	21.246	56.394	1.00	53.61	C
ATOM	2336	C ASP B 374	45.862	21.661	57.317	1.00	52.72	C
ATOM	2337	O ASP B 374	46.101	22.487	58.199	1.00	52.25	O
ATOM	2338	CB ASP B 374	46.929	22.068	55.120	1.00	56.95	C
ATOM	2339	CG ASP B 374	48.340	22.005	54.524	1.00	58.90	C
ATOM	2340	OD1 ASP B 374	49.234	21.611	55.307	1.00	59.70	O
ATOM	2341	OD2 ASP B 374	48.382	22.331	53.335	1.00	60.88	O
ATOM	2342	N GLN B 375	44.696	21.062	57.078	1.00	48.20	N
ATOM	2343	CA GLN B 375	43.547	21.361	57.929	1.00	44.27	C
ATOM	2344	C GLN B 375	43.825	20.918	59.341	1.00	42.91	C
ATOM	2345	O GLN B 375	43.586	21.609	60.327	1.00	44.49	O
ATOM	2346	CB GLN B 375	42.329	20.689	57.324	1.00	43.58	C
ATOM	2347	CG GLN B 375	41.962	21.403	55.992	1.00	42.71	C
ATOM	2348	CD GLN B 375	40.671	20.795	55.473	1.00	46.29	C
ATOM	2349	OE1 GLN B 375	40.180	19.789	55.992	1.00	46.02	O
ATOM	2350	NE2 GLN B 375	40.062	21.425	54.480	1.00	49.60	N
ATOM	2351	N VAL B 376	44.428	19.771	59.518	1.00	42.38	N
ATOM	2352	CA VAL B 376	44.734	19.265	60.872	1.00	41.31	C
ATOM	2353	C VAL B 376	45.808	20.127	61.495	1.00	45.24	C
ATOM	2354	O VAL B 376	45.836	20.342	62.711	1.00	48.81	O
ATOM	2355	CB VAL B 376	45.295	17.844	60.678	1.00	39.53	C
ATOM	2356	CG1 VAL B 376	45.791	17.269	61.958	1.00	37.82	C
ATOM	2357	CG2 VAL B 376	44.319	16.979	59.903	1.00	37.59	C
ATOM	2358	N HIS B 377	46.740	20.644	60.667	1.00	44.81	N
ATOM	2359	CA HIS B 377	47.792	21.478	61.269	1.00	44.39	C
ATOM	2360	C HIS B 377	47.155	22.780	61.769	1.00	41.44	C
ATOM	2361	O HIS B 377	47.358	23.208	62.881	1.00	42.24	O
ATOM	2362	CB HIS B 377	48.970	21.761	60.372	1.00	41.82	C
ATOM	2368	N LEU B 378	46.287	23.384	60.995	1.00	38.79	N
ATOM	2369	CA LEU B 378	45.586	24.560	61.452	1.00	37.49	C
ATOM	2370	C LEU B 378	44.817	24.307	62.738	1.00	39.70	C
ATOM	2371	O LEU B 378	44.965	25.065	63.742	1.00	40.23	O
ATOM	2372	CB LEU B 378	44.792	25.084	60.278	1.00	34.49	C
ATOM	2373	CG LEU B 378	45.660	25.626	59.142	1.00	33.30	C
ATOM	2374	CD1 LEU B 378	44.776	26.268	58.061	1.00	35.31	C

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ATOM 2375	CD2 LEU B 378	46.652 26.648 59.629 1.00 31.86	C
ATOM 2376	N LEU B 379	44.014 23.264 62.855 1.00 39.55	N
ATOM 2377	CA LEU B 379	43.281 23.045 64.108 1.00 39.47	C
ATOM 2378	C LEU B 379	44.236 22.621 65.183 1.00 40.67	C
ATOM 2379	O LEU B 379	44.113 22.953 66.367 1.00 44.03	O
ATOM 2380	CB LEU B 379	42.165 22.022 63.905 1.00 36.04	C
ATOM 2381	CG LEU B 379	41.035 22.590 63.044 1.00 36.14	C
ATOM 2382	CD1 LEU B 379	40.367 21.487 62.267 1.00 35.56	C
ATOM 2383	CD2 LEU B 379	40.005 23.346 63.905 1.00 35.13	C
ATOM 2384	N GLU B 380	45.299 21.916 64.808 1.00 44.30	N
ATOM 2385	CA GLU B 380	46.131 21.413 65.904 1.00 47.28	C
ATOM 2386	C GLU B 380	46.648 22.562 66.732 1.00 46.23	C
ATOM 2387	O GLU B 380	46.674 22.437 67.945 1.00 47.50	O
ATOM 2388	CB GLU B 380	47.223 20.484 65.491 1.00 55.36	C
ATOM 2389	CG GLU B 380	47.687 19.578 66.656 1.00 62.14	C
ATOM 2390	CD GLU B 380	48.998 18.908 66.279 1.00 68.73	C
ATOM 2391	OE1 GLU B 380	49.450 19.015 65.098 1.00 70.64	O
ATOM 2392	OE2 GLU B 380	49.588 18.269 67.182 1.00 73.27	O
ATOM 2393	N CYS B 381	47.067 23.599 66.056 1.00 45.88	N
ATOM 2394	CA CYS B 381	47.624 24.810 66.658 1.00 44.73	C
ATOM 2395	C CYS B 381	46.566 25.784 67.130 1.00 42.92	C
ATOM 2396	O CYS B 381	46.792 26.395 68.178 1.00 37.98	O
ATOM 2397	CB CYS B 381	48.572 25.454 65.635 1.00 52.09	C
ATOM 2398	SG CYS B 381	50.273 25.860 66.085 1.00 62.86	S
ATOM 2399	N ALA B 382	45.379 25.940 66.551 1.00 40.58	N
ATOM 2400	CA ALA B 382	44.429 26.942 66.967 1.00 38.93	C
ATOM 2401	C ALA B 382	43.279 26.563 67.872 1.00 38.58	C
ATOM 2402	O ALA B 382	42.620 27.427 68.424 1.00 37.32	O
ATOM 2403	CB ALA B 382	43.707 27.386 65.671 1.00 38.68	C
ATOM 2404	N TRP B 383	43.028 25.289 68.081 1.00 38.92	N
ATOM 2405	CA TRP B 383	41.892 24.847 68.875 1.00 36.09	C
ATOM 2406	C TRP B 383	41.683 25.516 70.178 1.00 35.26	C
ATOM 2407	O TRP B 383	40.574 26.008 70.530 1.00 33.42	O
ATOM 2408	CB TRP B 383	41.904 23.306 68.816 1.00 35.35	C
ATOM 2409	CG TRP B 383	42.837 22.774 69.826 1.00 33.79	C
ATOM 2410	CD1 TRP B 383	44.153 22.436 69.663 1.00 34.99	C
ATOM 2411	CD2 TRP B 383	42.517 22.560 71.200 1.00 32.33	C
ATOM 2412	NE1 TRP B 383	44.662 22.021 70.857 1.00 30.51	N
ATOM 2413	CE2 TRP B 383	43.696 22.081 71.823 1.00 29.75	C
ATOM 2414	CE3 TRP B 383	41.355 22.750 71.944 1.00 30.48	C
ATOM 2415	CZ2 TRP B 383	43.751 21.776 73.173 1.00 27.07	C
ATOM 2416	CZ3 TRP B 383	41.383 22.455 73.268 1.00 31.00	C
ATOM 2417	CH2 TRP B 383	42.591 21.963 73.857 1.00 33.85	C
ATOM 2418	N LEU B 384	42.744 25.635 70.972 1.00 33.40	N
ATOM 2419	CA LEU B 384	42.585 26.325 72.255 1.00 30.50	C
ATOM 2420	C LEU B 384	42.335 27.795 72.058 1.00 31.57	C
ATOM 2421	O LEU B 384	41.532 28.347 72.806 1.00 35.39	O
ATOM 2422	CB LEU B 384	43.720 26.041 73.207 1.00 26.71	C
ATOM 2423	CG LEU B 384	43.548 26.567 74.605 1.00 30.98	C

SUBSTITUTE SHEET (RULE 26)

ATOM	2424	CD1 LEU B 384	42.142	26.159	75.119	1.00	28.22	C
ATOM	2425	CD2 LEU B 384	44.636	26.068	75.544	1.00	30.47	C
ATOM	2426	N GLU B 385	42.924	28.480	71.086	1.00	33.08	N
ATOM	2427	CA GLU B 385	42.672	29.904	70.872	1.00	31.19	C
ATOM	2428	C GLU B 385	41.220	30.055	70.463	1.00	33.31	C
ATOM	2429	O GLU B 385	40.514	31.029	70.802	1.00	37.28	O
ATOM	2430	CB GLU B 385	43.519	30.540	69.811	1.00	33.75	C
ATOM	2431	CG GLU B 385	45.019	30.277	69.811	1.00	38.27	C
ATOM	2432	CD GLU B 385	45.821	31.092	68.845	1.00	37.52	C
ATOM	2433	OE1 GLU B 385	45.581	32.266	68.657	1.00	39.60	O
ATOM	2434	OE2 GLU B 385	46.769	30.620	68.199	1.00	44.18	O
ATOM	2435	N ILE B 386	40.737	29.029	69.767	1.00	32.56	N
ATOM	2436	CA ILE B 386	39.318	29.081	69.346	1.00	32.62	C
ATOM	2437	C ILE B 386	38.361	28.909	70.500	1.00	30.09	C
ATOM	2438	O ILE B 386	37.359	29.606	70.692	1.00	25.95	O
ATOM	2439	CB ILE B 386	39.100	28.108	68.191	1.00	33.30	C
ATOM	2440	CG1 ILE B 386	39.894	28.679	66.969	1.00	34.06	C
ATOM	2441	CG2 ILE B 386	37.643	28.026	67.815	1.00	34.81	C
ATOM	2442	CD1 ILE B 386	39.864	27.634	65.882	1.00	37.55	C
ATOM	2443	N LEU B 387	38.667	27.956	71.384	1.00	27.87	N
ATOM	2444	CA LEU B 387	37.825	27.773	72.542	1.00	26.27	C
ATOM	2445	C LEU B 387	37.817	29.048	73.365	1.00	29.90	C
ATOM	2446	O LEU B 387	36.749	29.493	73.824	1.00	27.72	O
ATOM	2447	CB LEU B 387	38.375	26.590	73.322	1.00	23.50	C
ATOM	2448	CG LEU B 387	37.930	25.215	72.829	1.00	26.32	C
ATOM	2449	CD1 LEU B 387	38.303	24.168	73.896	1.00	21.89	C
ATOM	2450	CD2 LEU B 387	36.426	25.150	72.471	1.00	21.80	C
ATOM	2451	N MET B 388	39.039	29.641	73.530	1.00	32.23	N
ATOM	2452	CA MET B 388	39.121	30.826	74.393	1.00	31.87	C
ATOM	2453	C MET B 388	38.427	32.009	73.806	1.00	31.46	C
ATOM	2454	O MET B 388	37.570	32.663	74.412	1.00	35.84	O
ATOM	2455	CB MET B 388	40.499	31.143	74.859	1.00	31.50	C
ATOM	2456	CG MET B 388	41.227	30.030	75.631	1.00	32.92	C
ATOM	2457	SD MET B 388	42.970	30.484	75.860	1.00	33.47	S
ATOM	2458	CE MET B 388	43.587	29.273	76.951	1.00	27.60	C
ATOM	2459	N ILE B 389	38.672	32.264	72.523	1.00	30.09	N
ATOM	2460	CA ILE B 389	37.966	33.444	71.987	1.00	25.61	C
ATOM	2461	C ILE B 389	36.495	33.253	72.136	1.00	28.80	C
ATOM	2462	O ILE B 389	35.793	34.263	72.389	1.00	34.46	O
ATOM	2463	CB ILE B 389	38.481	33.851	70.625	1.00	24.14	C
ATOM	2464	CG1 ILE B 389	38.357	35.373	70.508	1.00	25.05	C
ATOM	2465	CG2 ILE B 389	37.936	33.063	69.481	1.00	19.98	C
ATOM	2466	CD1 ILE B 389	38.059	35.936	69.168	1.00	28.34	C
ATOM	2467	N GLY B 390	35.932	32.076	72.040	1.00	30.54	N
ATOM	2468	CA GLY B 390	34.488	31.888	72.191	1.00	33.74	C
ATOM	2469	C GLY B 390	34.072	32.112	73.639	1.00	37.29	C
ATOM	2470	O GLY B 390	33.044	32.716	73.939	1.00	36.80	O
ATOM	2471	N LEU B 391	34.943	31.673	74.553	1.00	37.25	N
ATOM	2472	CA LEU B 391	34.604	31.848	75.994	1.00	35.83	C

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ATOM	2473	C	LEU B 391	34.570	33.325	76.242	1.00	34.46	C
ATOM	2474	O	LEU B 391	33.700	33.918	76.805	1.00	33.17	O
ATOM	2475	CB	LEU B 391	35.734	31.153	76.794	1.00	31.89	C
ATOM	2476	CG	LEU B 391	35.804	31.397	78.283	1.00	31.45	C
ATOM	2477	CD1	LEU B 391	34.434	31.098	78.962	1.00	27.42	C
ATOM	2478	CD2	LEU B 391	36.881	30.540	78.949	1.00	28.75	C
ATOM	2479	N	VAL B 392	35.639	33.979	75.742	1.00	34.72	N
ATOM	2480	CA	VAL B 392	35.682	35.420	75.958	1.00	35.50	C
ATOM	2481	C	VAL B 392	34.427	36.097	75.475	1.00	34.25	C
ATOM	2482	O	VAL B 392	33.873	37.022	76.024	1.00	33.10	O
ATOM	2483	CB	VAL B 392	36.940	36.027	75.296	1.00	36.25	C
ATOM	2484	CG1	VAL B 392	36.823	37.540	75.354	1.00	37.18	C
ATOM	2485	CG2	VAL B 392	38.161	35.626	76.107	1.00	35.78	C
ATOM	2486	N	TRP B 393	34.037	35.771	74.253	1.00	37.03	N
ATOM	2487	CA	TRP B 393	32.918	36.461	73.632	1.00	39.42	C
ATOM	2488	C	TRP B 393	31.642	36.272	74.423	1.00	40.00	C
ATOM	2489	O	TRP B 393	30.896	37.192	74.710	1.00	42.71	O
ATOM	2490	CB	TRP B 393	32.740	35.936	72.209	1.00	37.68	C
ATOM	2491	CG	TRP B 393	31.419	36.230	71.609	1.00	36.38	C
ATOM	2492	CD1	TRP B 393	30.405	35.350	71.438	1.00	38.63	C
ATOM	2493	CD2	TRP B 393	30.971	37.487	71.102	1.00	35.68	C
ATOM	2494	NE1	TRP B 393	29.324	36.007	70.826	1.00	41.40	N
ATOM	2495	CE2	TRP B 393	29.678	37.308	70.602	1.00	37.07	C
ATOM	2496	CE3	TRP B 393	31.542	38.740	70.957	1.00	36.83	C
ATOM	2497	CZ2	TRP B 393	28.961	38.338	70.031	1.00	36.96	C
ATOM	2498	CZ3	TRP B 393	30.857	39.743	70.349	1.00	33.97	C
ATOM	2499	CH2	TRP B 393	29.553	39.557	69.920	1.00	34.11	C
ATOM	2500	N	ARG B 394	31.366	35.039	74.802	1.00	39.93	N
ATOM	2501	CA	ARG B 394	30.174	34.701	75.560	1.00	36.65	C
ATOM	2502	C	ARG B 394	30.229	35.138	76.994	1.00	39.01	C
ATOM	2503	O	ARG B 394	29.194	35.311	77.694	1.00	41.96	O
ATOM	2504	CB	ARG B 394	29.735	33.315	75.250	1.00	31.49	C
ATOM	2505	CG	ARG B 394	30.122	32.235	76.172	1.00	30.97	C
ATOM	2506	CD	ARG B 394	30.036	30.869	75.442	1.00	29.86	C
ATOM	2507	NE	ARG B 394	30.928	29.919	76.189	1.00	28.98	N
ATOM	2508	CZ	ARG B 394	31.886	29.263	75.552	1.00	30.39	C
ATOM	2509	NH1	ARG B 394	31.995	29.476	74.222	1.00	28.81	N
ATOM	2510	NH2	ARG B 394	32.703	28.414	76.192	1.00	26.10	N
ATOM	2511	N	SER B 395	31.374	35.561	77.468	1.00	39.89	N
ATOM	2512	CA	SER B 395	31.581	36.128	78.784	1.00	36.60	C
ATOM	2513	C	SER B 395	31.396	37.621	78.802	1.00	42.53	C
ATOM	2514	O	SER B 395	31.142	38.237	79.847	1.00	46.22	O
ATOM	2515	CB	SER B 395	33.039	35.845	79.155	1.00	31.85	C
ATOM	2516	OG	SER B 395	33.079	34.457	79.436	1.00	28.12	O
ATOM	2517	N	MET B 396	31.520	38.302	77.688	1.00	47.19	N
ATOM	2518	CA	MET B 396	31.421	39.733	77.641	1.00	51.47	C
ATOM	2519	C	MET B 396	30.489	40.366	78.647	1.00	56.34	C
ATOM	2520	O	MET B 396	30.895	41.118	79.524	1.00	60.12	O
ATOM	2521	CB	MET B 396	30.902	40.139	76.254	1.00	49.14	C

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ATOM	2522	CG	MET B 396	32.062	40.727	75.463	1.00	48.10	C
ATOM	2523	SD	MET B 396	31.548	41.224	73.856	1.00	42.86	S
ATOM	2524	CE	MET B 396	30.173	40.085	73.579	1.00	50.12	C
ATOM	2525	N	GLU B 397	29.212	40.096	78.533	1.00	60.93	N
ATOM	2526	CA	GLU B 397	28.199	40.683	79.382	1.00	65.88	C
ATOM	2527	C	GLU B 397	27.987	39.977	80.693	1.00	66.69	C
ATOM	2528	O	GLU B 397	26.865	39.933	81.243	1.00	69.14	O
ATOM	2529	CB	GLU B 397	26.895	40.725	78.560	1.00	68.52	C
ATOM	2530	CG	GLU B 397	27.191	41.201	77.117	1.00	70.94	C
ATOM	2534	N	HIS B 398	29.052	39.472	81.294	1.00	63.21	N
ATOM	2535	CA	HIS B 398	29.084	38.799	82.562	1.00	62.64	C
ATOM	2536	C	HIS B 398	30.377	39.211	83.282	1.00	63.75	C
ATOM	2537	O	HIS B 398	31.215	38.369	83.640	1.00	64.14	O
ATOM	2538	CB	HIS B 398	29.047	37.286	82.440	1.00	61.15	C
ATOM	2539	CG	HIS B 398	27.721	36.747	82.061	1.00	63.91	C
ATOM	2540	ND1	HIS B 398	27.211	36.810	80.779	1.00	67.22	N
ATOM	2541	CD2	HIS B 398	26.766	36.129	82.765	1.00	65.22	C
ATOM	2542	CE1	HIS B 398	26.028	36.256	80.685	1.00	65.18	C
ATOM	2543	NE2	HIS B 398	25.756	35.822	81.899	1.00	66.32	N
ATOM	2544	N	PRO B 399	30.569	40.505	83.387	1.00	63.39	N
ATOM	2545	CA	PRO B 399	31.751	41.084	83.999	1.00	62.77	C
ATOM	2546	C	PRO B 399	32.046	40.395	85.316	1.00	62.99	C
ATOM	2547	O	PRO B 399	31.131	40.222	86.121	1.00	66.99	O
ATOM	2548	CB	PRO B 399	31.512	42.569	84.233	1.00	64.41	C
ATOM	2549	CG	PRO B 399	30.077	42.748	83.819	1.00	65.85	C
ATOM	2550	CD	PRO B 399	29.632	41.547	83.014	1.00	64.17	C
ATOM	2551	N	GLY B 400	33.283	40.001	85.491	1.00	60.52	N
ATOM	2552	CA	GLY B 400	33.805	39.350	86.646	1.00	58.08	C
ATOM	2553	C	GLY B 400	33.773	37.854	86.557	1.00	59.78	C
ATOM	2554	O	GLY B 400	34.357	37.126	87.369	1.00	60.70	O
ATOM	2555	N	LYS B 401	33.025	37.335	85.584	1.00	61.41	N
ATOM	2556	CA	LYS B 401	32.870	35.896	85.450	1.00	61.48	C
ATOM	2557	C	LYS B 401	33.127	35.416	84.033	1.00	56.79	C
ATOM	2558	O	LYS B 401	32.888	36.166	83.100	1.00	57.78	O
ATOM	2559	CB	LYS B 401	31.394	35.554	85.812	1.00	68.06	C
ATOM	2560	CG	LYS B 401	31.103	35.685	87.314	1.00	72.86	C
ATOM	2561	CD	LYS B 401	29.880	34.879	87.707	1.00	77.25	C
ATOM	2562	CE	LYS B 401	29.705	34.764	89.220	1.00	79.35	C
ATOM	2563	NZ	LYS B 401	29.631	33.337	89.702	1.00	80.08	N
ATOM	2564	N	LEU B 402	33.544	34.179	83.889	1.00	49.79	N
ATOM	2565	CA	LEU B 402	33.670	33.432	82.678	1.00	42.60	C
ATOM	2566	C	LEU B 402	32.478	32.509	82.437	1.00	41.15	C
ATOM	2567	O	LEU B 402	32.258	31.587	83.216	1.00	38.93	O
ATOM	2568	CB	LEU B 402	34.960	32.546	82.682	1.00	33.63	C
ATOM	2569	CG	LEU B 402	36.184	33.473	82.725	1.00	32.31	C
ATOM	2570	CD1	LEU B 402	37.502	32.732	82.793	1.00	23.92	C
ATOM	2571	CD2	LEU B 402	36.090	34.463	81.577	1.00	30.62	C
ATOM	2572	N	LEU B 403	31.775	32.667	81.328	1.00	39.54	N
ATOM	2573	CA	LEU B 403	30.640	31.792	81.035	1.00	39.78	C

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ATOM	2574	C	LEU B 403	31.075	30.627	80.170	1.00	41.72	C
ATOM	2575	O	LEU B 403	30.816	30.480	78.966	1.00	39.71	O
ATOM	2576	CB	LEU B 403	29.533	32.667	80.452	1.00	42.24	C
ATOM	2577	CG	LEU B 403	28.282	32.018	79.890	1.00	43.89	C
ATOM	2578	CD1	LEU B 403	27.362	31.660	81.021	1.00	45.14	C
ATOM	2579	CD2	LEU B 403	27.562	32.874	78.861	1.00	43.05	C
ATOM	2580	N	PHE B 404	31.718	29.626	80.832	1.00	40.77	N
ATOM	2581	CA	PHE B 404	32.176	28.419	80.149	1.00	39.29	C
ATOM	2582	C	PHE B 404	30.962	27.790	79.501	1.00	40.29	C
ATOM	2583	O	PHE B 404	31.038	27.336	78.381	1.00	43.81	O
ATOM	2584	CB	PHE B 404	32.905	27.438	81.026	1.00	37.12	C
ATOM	2585	CG	PHE B 404	34.242	27.934	81.498	1.00	34.95	C
ATOM	2586	CD1	PHE B 404	34.333	28.785	82.593	1.00	35.02	C
ATOM	2587	CD2	PHE B 404	35.395	27.576	80.848	1.00	31.59	C
ATOM	2588	CE1	PHE B 404	35.587	29.241	83.023	1.00	37.43	C
ATOM	2589	CE2	PHE B 404	36.616	28.005	81.263	1.00	30.58	C
ATOM	2590	CZ	PHE B 404	36.740	28.838	82.341	1.00	33.26	C
ATOM	2591	N	ALA B 405	29.828	27.789	80.137	1.00	41.67	N
ATOM	2592	CA	ALA B 405	28.558	27.337	79.623	1.00	39.74	C
ATOM	2593	C	ALA B 405	27.478	28.187	80.286	1.00	42.77	C
ATOM	2594	O	ALA B 405	27.723	28.829	81.314	1.00	45.02	O
ATOM	2595	CB	ALA B 405	28.274	25.894	79.888	1.00	38.06	C
ATOM	2596	N	PRO B 406	26.272	28.127	79.754	1.00	41.38	N
ATOM	2597	CA	PRO B 406	25.134	28.819	80.323	1.00	39.78	C
ATOM	2598	C	PRO B 406	24.922	28.230	81.704	1.00	43.39	C
ATOM	2599	O	PRO B 406	24.687	28.978	82.635	1.00	47.07	O
ATOM	2600	CB	PRO B 406	23.942	28.571	79.409	1.00	39.54	C
ATOM	2601	CG	PRO B 406	24.615	28.101	78.150	1.00	39.07	C
ATOM	2602	CD	PRO B 406	25.913	27.404	78.549	1.00	40.30	C
ATOM	2603	N	ASN B 407	25.132	26.931	81.904	1.00	44.70	N
ATOM	2604	CA	ASN B 407	24.938	26.334	83.217	1.00	44.35	C
ATOM	2605	C	ASN B 407	26.234	26.164	83.961	1.00	44.55	C
ATOM	2606	O	ASN B 407	26.358	25.322	84.859	1.00	43.21	O
ATOM	2607	CB	ASN B 407	24.207	24.990	83.095	1.00	45.30	C
ATOM	2608	CG	ASN B 407	25.102	23.905	82.560	1.00	48.52	C
ATOM	2609	OD1	ASN B 407	26.017	24.173	81.765	1.00	52.75	O
ATOM	2610	ND2	ASN B 407	24.868	22.682	82.982	1.00	47.55	N
ATOM	2611	N	LEU B 408	27.230	26.971	83.581	1.00	44.78	N
ATOM	2612	CA	LEU B 408	28.530	26.840	84.245	1.00	43.66	C
ATOM	2613	C	LEU B 408	29.274	28.160	84.105	1.00	46.96	C
ATOM	2614	O	LEU B 408	30.177	28.206	83.300	1.00	47.50	O
ATOM	2615	CB	LEU B 408	29.348	25.734	83.640	1.00	39.42	C
ATOM	2616	CG	LEU B 408	30.702	25.450	84.231	1.00	41.46	C
ATOM	2617	CD1	LEU B 408	30.579	25.028	85.691	1.00	43.35	C
ATOM	2618	CD2	LEU B 408	31.454	24.396	83.439	1.00	40.80	C
ATOM	2619	N	LEU B 409	28.857	29.155	84.856	1.00	49.18	N
ATOM	2620	CA	LEU B 409	29.399	30.474	84.971	1.00	51.85	C
ATOM	2621	C	LEU B 409	30.384	30.538	86.149	1.00	54.53	C
ATOM	2622	O	LEU B 409	29.967	30.547	87.300	1.00	57.83	O

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ATOM	2623	CB	LEU B 409	28.340	31.522	85.263	1.00	53.57	C
ATOM	2624	CG	LEU B 409	28.208	32.705	84.304	1.00	56.69	C
ATOM	2625	CD1	LEU B 409	27.190	33.676	84.863	1.00	58.76	C
ATOM	2626	CD2	LEU B 409	29.511	33.469	84.096	1.00	60.29	C
ATOM	2627	N	LEU B 410	31.684	30.568	85.948	1.00	56.52	N
ATOM	2628	CA	LEU B 410	32.622	30.625	87.050	1.00	57.78	C
ATOM	2629	C	LEU B 410	33.131	32.014	87.352	1.00	60.74	C
ATOM	2630	O	LEU B 410	33.065	32.919	86.536	1.00	61.43	O
ATOM	2631	CB	LEU B 410	33.793	29.697	86.775	1.00	55.15	C
ATOM	2632	CG	LEU B 410	33.369	28.268	86.444	1.00	56.92	C
ATOM	2633	CD1	LEU B 410	34.600	27.365	86.376	1.00	56.84	C
ATOM	2634	CD2	LEU B 410	32.356	27.738	87.431	1.00	57.08	C
ATOM	2635	N	ASP B 411	33.677	32.165	88.572	1.00	65.01	N
ATOM	2636	CA	ASP B 411	34.291	33.444	88.902	1.00	68.80	C
ATOM	2637	C	ASP B 411	35.776	33.281	89.195	1.00	70.34	C
ATOM	2638	O	ASP B 411	36.382	32.211	89.207	1.00	68.27	O
ATOM	2639	CB	ASP B 411	33.574	34.240	89.949	1.00	70.88	C
ATOM	2640	CG	ASP B 411	33.773	33.786	91.365	1.00	74.30	C
ATOM	2641	OD1	ASP B 411	34.583	32.883	91.668	1.00	74.72	O
ATOM	2642	OD2	ASP B 411	33.060	34.367	92.226	1.00	77.95	O
ATOM	2643	N	ARG B 412	36.396	34.443	89.364	1.00	74.74	N
ATOM	2644	CA	ARG B 412	37.829	34.494	89.644	1.00	80.38	C
ATOM	2645	C	ARG B 412	38.189	33.373	90.604	1.00	80.69	C
ATOM	2646	O	ARG B 412	38.898	32.449	90.243	1.00	78.33	O
ATOM	2647	CB	ARG B 412	38.162	35.890	90.187	1.00	83.01	C
ATOM	2648	CG	ARG B 412	39.587	36.336	89.915	1.00	85.83	C
ATOM	2649	CD	ARG B 412	40.431	36.092	91.155	1.00	91.09	C
ATOM	2650	NE	ARG B 412	41.691	36.817	91.104	1.00	95.37	N
ATOM	2651	CZ	ARG B 412	41.822	38.132	91.175	1.00	98.19	C
ATOM	2652	NH1	ARG B 412	40.778	38.942	91.304	1.00	99.46	N
ATOM	2653	NH2	ARG B 412	43.056	38.633	91.100	1.00	99.88	N
ATOM	2654	N	ASN B 413	37.629	33.416	91.803	1.00	84.19	N
ATOM	2655	CA	ASN B 413	37.857	32.474	92.865	1.00	88.23	C
ATOM	2656	C	ASN B 413	37.540	31.038	92.501	1.00	88.31	C
ATOM	2657	O	ASN B 413	38.303	30.145	92.905	1.00	90.19	O
ATOM	2658	CB	ASN B 413	37.066	32.816	94.124	1.00	93.69	C
ATOM	2659	CG	ASN B 413	37.256	34.251	94.583	1.00	98.12	C
ATOM	2660	OD1	ASN B 413	38.377	34.740	94.777	1.00	99.52	O
ATOM	2661	ND2	ASN B 413	36.111	34.922	94.750	1.00	98.85	N
ATOM	2662	N	GLN B 414	36.481	30.791	91.736	1.00	86.19	N
ATOM	2663	CA	GLN B 414	36.205	29.400	91.356	1.00	84.88	C
ATOM	2664	C	GLN B 414	37.345	28.898	90.482	1.00	83.77	C
ATOM	2665	O	GLN B 414	37.725	27.734	90.524	1.00	82.50	O
ATOM	2666	CB	GLN B 414	34.851	29.225	90.711	1.00	85.16	C
ATOM	2667	CG	GLN B 414	33.634	29.538	91.539	1.00	85.29	C
ATOM	2668	CD	GLN B 414	32.342	29.697	90.770	1.00	85.76	C
ATOM	2669	OE1	GLN B 414	31.999	30.741	90.206	1.00	85.32	O
ATOM	2670	NE2	GLN B 414	31.505	28.648	90.742	1.00	86.28	N
ATOM	2671	N	GLY B 415	37.941	29.766	89.685	1.00	84.78	N

ATOM	2672	CA	GLY B 415	39.053	29.370	88.813	1.00	87.32	C
ATOM	2673	C	GLY B 415	40.291	29.004	89.616	1.00	87.99	C
ATOM	2674	O	GLY B 415	41.156	28.238	89.181	1.00	86.24	O
ATOM	2675	N	LYS B 416	40.364	29.509	90.842	1.00	90.55	N
ATOM	2676	CA	LYS B 416	41.442	29.218	91.767	1.00	93.58	C
ATOM	2677	C	LYS B 416	41.561	27.754	92.141	1.00	95.38	C
ATOM	2678	O	LYS B 416	42.671	27.241	92.349	1.00	95.66	O
ATOM	2679	CB	LYS B 416	41.269	30.074	93.037	1.00	93.15	C
ATOM	2684	N	CYS B 417	40.489	26.977	92.152	1.00	97.58	N
ATOM	2685	CA	CYS B 417	40.448	25.571	92.472	1.00	100.45	C
ATOM	2686	C	CYS B 417	41.276	24.692	91.543	1.00	99.99	C
ATOM	2687	O	CYS B 417	41.292	23.457	91.586	1.00	99.87	O
ATOM	2688	CB	CYS B 417	39.005	25.045	92.445	1.00	103.57	C
ATOM	2689	SG	CYS B 417	37.717	25.947	93.323	1.00	109.90	S
ATOM	2690	N	VAL B 418	41.992	25.273	90.607	1.00	99.92	N
ATOM	2691	CA	VAL B 418	42.857	24.622	89.651	1.00	99.16	C
ATOM	2692	C	VAL B 418	44.197	25.380	89.670	1.00	98.34	C
ATOM	2693	O	VAL B 418	44.186	26.600	89.508	1.00	97.73	O
ATOM	2694	CB	VAL B 418	42.303	24.667	88.218	1.00	99.72	C
ATOM	2695	CG1	VAL B 418	43.007	23.621	87.358	1.00	97.84	C
ATOM	2696	CG2	VAL B 418	40.795	24.517	88.146	1.00	98.53	C
ATOM	2697	N	GLU B 419	45.278	24.673	89.873	1.00	98.42	N
ATOM	2698	CA	GLU B 419	46.605	25.274	89.952	1.00	98.68	C
ATOM	2699	C	GLU B 419	47.104	25.893	88.661	1.00	97.48	C
ATOM	2700	O	GLU B 419	47.289	25.222	87.639	1.00	98.90	O
ATOM	2701	CB	GLU B 419	47.598	24.230	90.490	1.00	99.66	C
ATOM	2706	N	GLY B 420	47.362	27.207	88.696	1.00	94.17	N
ATOM	2707	CA	GLY B 420	47.816	27.918	87.511	1.00	91.36	C
ATOM	2708	C	GLY B 420	46.684	28.553	86.708	1.00	88.54	C
ATOM	2709	O	GLY B 420	46.918	29.464	85.895	1.00	88.73	O
ATOM	2710	N	MET B 421	45.435	28.140	86.958	1.00	83.23	N
ATOM	2711	CA	MET B 421	44.336	28.679	86.203	1.00	80.10	C
ATOM	2712	C	MET B 421	44.023	30.138	86.465	1.00	76.64	C
ATOM	2713	O	MET B 421	43.546	30.845	85.548	1.00	77.79	O
ATOM	2714	CB	MET B 421	43.107	27.781	86.353	1.00	80.33	C
ATOM	2715	CG	MET B 421	42.062	28.036	85.275	1.00	79.26	C
ATOM	2716	SD	MET B 421	40.735	26.848	85.309	1.00	79.88	S
ATOM	2717	CE	MET B 421	41.509	25.424	84.511	1.00	78.20	C
ATOM	2718	N	VAL B 422	44.329	30.649	87.633	1.00	70.06	N
ATOM	2719	CA	VAL B 422	44.014	32.028	87.971	1.00	66.93	C
ATOM	2720	C	VAL B 422	44.617	33.051	87.034	1.00	62.98	C
ATOM	2721	O	VAL B 422	43.970	33.990	86.582	1.00	59.44	O
ATOM	2722	CB	VAL B 422	44.481	32.384	89.405	1.00	67.44	C
ATOM	2723	CG1	VAL B 422	43.588	33.465	89.994	1.00	66.70	C
ATOM	2724	CG2	VAL B 422	44.478	31.117	90.259	1.00	69.52	C
ATOM	2725	N	GLU B 423	45.911	32.877	86.738	1.00	62.98	N
ATOM	2726	CA	GLU B 423	46.561	33.863	85.854	1.00	60.72	C
ATOM	2727	C	GLU B 423	45.900	33.831	84.486	1.00	56.94	C
ATOM	2728	O	GLU B 423	45.496	34.892	83.976	1.00	58.86	O

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ATOM	2729	CB	GLU B 423	48.059	33.742	85.792	1.00	59.28	C
ATOM	2734	N	ILE B 424	45.629	32.636	83.964	1.00	50.05	N
ATOM	2735	CA	ILE B 424	44.981	32.635	82.652	1.00	48.51	C
ATOM	2736	C	ILE B 424	43.567	33.171	82.750	1.00	49.35	C
ATOM	2737	O	ILE B 424	43.062	33.956	81.959	1.00	47.73	O
ATOM	2738	CB	ILE B 424	45.041	31.288	81.951	1.00	44.17	C
ATOM	2739	CG1	ILE B 424	46.526	30.904	81.777	1.00	41.42	C
ATOM	2740	CG2	ILE B 424	44.420	31.454	80.588	1.00	40.80	C
ATOM	2741	CD1	ILE B 424	46.831	29.512	82.271	1.00	39.66	C
ATOM	2742	N	PHE B 425	42.905	32.732	83.813	1.00	49.07	N
ATOM	2743	CA	PHE B 425	41.562	33.166	84.131	1.00	49.17	C
ATOM	2744	C	PHE B 425	41.450	34.686	84.190	1.00	49.03	C
ATOM	2745	O	PHE B 425	40.517	35.354	83.723	1.00	46.73	O
ATOM	2746	CB	PHE B 425	41.241	32.595	85.529	1.00	51.92	C
ATOM	2747	CG	PHE B 425	39.762	32.392	85.709	1.00	51.58	C
ATOM	2748	CD1	PHE B 425	38.960	33.504	85.864	1.00	53.18	C
ATOM	2749	CD2	PHE B 425	39.212	31.134	85.713	1.00	50.30	C
ATOM	2750	CE1	PHE B 425	37.593	33.370	86.021	1.00	54.70	C
ATOM	2751	CE2	PHE B 425	37.858	30.966	85.875	1.00	51.75	C
ATOM	2752	CZ	PHE B 425	37.049	32.078	86.029	1.00	54.42	C
ATOM	2753	N	ASP B 426	42.475	35.304	84.790	1.00	48.98	N
ATOM	2754	CA	ASP B 426	42.505	36.760	84.888	1.00	48.73	C
ATOM	2755	C	ASP B 426	42.643	37.411	83.529	1.00	46.01	C
ATOM	2756	O	ASP B 426	42.027	38.412	83.218	1.00	46.68	O
ATOM	2757	CB	ASP B 426	43.708	37.168	85.736	1.00	52.22	C
ATOM	2758	CG	ASP B 426	43.343	37.213	87.204	1.00	52.65	C
ATOM	2759	OD1	ASP B 426	42.139	37.339	87.499	1.00	54.85	O
ATOM	2760	OD2	ASP B 426	44.300	37.109	87.971	1.00	55.57	O
ATOM	2761	N	MET B 427	43.495	36.795	82.730	1.00	44.72	N
ATOM	2762	CA	MET B 427	43.797	37.174	81.364	1.00	41.75	C
ATOM	2763	C	MET B 427	42.544	37.067	80.504	1.00	39.43	C
ATOM	2764	O	MET B 427	42.155	37.984	79.789	1.00	39.81	O
ATOM	2765	CB	MET B 427	44.907	36.188	80.884	1.00	44.36	C
ATOM	2766	CG	MET B 427	46.294	36.729	81.084	1.00	48.85	C
ATOM	2767	SD	MET B 427	47.678	35.780	80.492	1.00	55.91	S
ATOM	2768	CE	MET B 427	47.419	34.154	81.133	1.00	52.49	C
ATOM	2769	N	LEU B 428	41.814	35.942	80.690	1.00	35.14	N
ATOM	2770	CA	LEU B 428	40.580	35.698	79.969	1.00	34.18	C
ATOM	2771	C	LEU B 428	39.597	36.778	80.362	1.00	34.40	C
ATOM	2772	O	LEU B 428	39.044	37.473	79.523	1.00	35.33	O
ATOM	2773	CB	LEU B 428	39.989	34.299	80.162	1.00	30.49	C
ATOM	2774	CG	LEU B 428	40.876	33.217	79.482	1.00	28.71	C
ATOM	2775	CD1	LEU B 428	40.714	31.829	79.995	1.00	26.98	C
ATOM	2776	CD2	LEU B 428	40.656	33.261	78.002	1.00	29.20	C
ATOM	2777	N	LEU B 429	39.562	37.071	81.667	1.00	37.03	N
ATOM	2778	CA	LEU B 429	38.678	38.138	82.109	1.00	35.92	C
ATOM	2779	C	LEU B 429	39.005	39.465	81.457	1.00	35.69	C
ATOM	2780	O	LEU B 429	38.047	40.111	80.996	1.00	33.54	O
ATOM	2781	CB	LEU B 429	38.703	38.277	83.621	1.00	32.15	C

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ATOM 2782	CG LEU B 429	37.830 37.222 84.321 1.00 33.08	C
ATOM 2783	CD1 LEU B 429	38.082 37.290 85.814 1.00 27.55	C
ATOM 2784	CD2 LEU B 429	36.362 37.329 83.909 1.00 29.01	C
ATOM 2785	N ALA B 430	40.296 39.813 81.393 1.00 32.95	N
ATOM 2786	CA ALA B 430	40.634 41.126 80.826 1.00 36.84	C
ATOM 2787	C ALA B 430	40.338 41.228 79.335 1.00 38.44	C
ATOM 2788	O ALA B 430	39.968 42.264 78.761 1.00 36.45	O
ATOM 2789	CB ALA B 430	42.102 41.541 81.010 1.00 34.40	C
ATOM 2790	N THR B 431	40.580 40.079 78.661 1.00 37.54	N
ATOM 2791	CA THR B 431	40.159 40.081 77.252 1.00 36.70	C
ATOM 2792	C THR B 431	38.676 40.337 77.081 1.00 37.98	C
ATOM 2793	O THR B 431	38.287 41.142 76.201 1.00 35.69	O
ATOM 2794	CB THR B 431	40.645 38.754 76.682 1.00 35.10	C
ATOM 2795	OG1 THR B 431	42.064 38.624 77.003 1.00 38.56	O
ATOM 2796	CG2 THR B 431	40.434 38.713 75.188 1.00 31.41	C
ATOM 2797	N SER B 432	37.747 39.703 77.877 1.00 39.84	N
ATOM 2798	CA SER B 432	36.344 39.976 77.574 1.00 45.36	C
ATOM 2799	C SER B 432	36.025 41.411 77.977 1.00 43.30	C
ATOM 2800	O SER B 432	35.274 42.080 77.282 1.00 42.62	O
ATOM 2801	CB SER B 432	35.225 39.117 78.140 1.00 45.94	C
ATOM 2802	OG SER B 432	35.659 38.558 79.329 1.00 49.61	O
ATOM 2803	N SER B 433	36.744 41.837 78.999 1.00 43.13	N
ATOM 2804	CA SER B 433	36.535 43.234 79.330 1.00 46.73	C
ATOM 2805	C SER B 433	36.855 44.133 78.146 1.00 46.01	C
ATOM 2806	O SER B 433	36.086 45.008 77.734 1.00 49.24	O
ATOM 2807	CB SER B 433	37.281 43.646 80.573 1.00 49.56	C
ATOM 2808	OG SER B 433	37.206 45.117 80.541 1.00 58.60	O
ATOM 2809	N ARG B 434	37.992 43.977 77.531 1.00 45.21	N
ATOM 2810	CA ARG B 434	38.409 44.760 76.382 1.00 44.15	C
ATOM 2811	C ARG B 434	37.442 44.548 75.237 1.00 45.33	C
ATOM 2812	O ARG B 434	37.074 45.482 74.494 1.00 45.12	O
ATOM 2813	CB ARG B 434	39.835 44.290 76.082 1.00 46.77	C
ATOM 2814	CG ARG B 434	40.513 45.050 74.967 1.00 55.03	C
ATOM 2815	CD ARG B 434	40.600 46.516 75.253 1.00 61.34	C
ATOM 2816	NE ARG B 434	40.638 47.463 74.192 1.00 66.92	N
ATOM 2817	CZ ARG B 434	41.455 47.618 73.169 1.00 70.57	C
ATOM 2818	NH1 ARG B 434	42.477 46.762 73.004 1.00 73.65	N
ATOM 2819	NH2 ARG B 434	41.260 48.625 72.314 1.00 69.23	N
ATOM 2820	N PHE B 435	36.897 43.321 75.074 1.00 44.07	N
ATOM 2821	CA PHE B 435	35.874 43.158 74.043 1.00 44.36	C
ATOM 2822	C PHE B 435	34.672 44.042 74.362 1.00 42.27	C
ATOM 2823	O PHE B 435	34.122 44.594 73.437 1.00 40.63	O
ATOM 2824	CB PHE B 435	35.460 41.727 73.743 1.00 44.13	C
ATOM 2825	CG PHE B 435	36.410 40.882 72.948 1.00 46.42	C
ATOM 2826	CD1 PHE B 435	37.432 41.396 72.187 1.00 47.77	C
ATOM 2827	CD2 PHE B 435	36.310 39.505 72.955 1.00 48.65	C
ATOM 2828	CE1 PHE B 435	38.314 40.645 71.467 1.00 46.44	C
ATOM 2829	CE2 PHE B 435	37.178 38.706 72.249 1.00 50.86	C
ATOM 2830	CZ PHE B 435	38.196 39.278 71.493 1.00 49.02	C

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ATOM	2831	N	ARG B 436	34.265	44.140	75.618	1.00	45.66	N
ATOM	2832	CA	ARG B 436	33.117	44.927	76.027	1.00	49.37	C
ATOM	2833	C	ARG B 436	33.448	46.381	75.719	1.00	51.24	C
ATOM	2834	O	ARG B 436	32.772	47.028	74.922	1.00	53.18	O
ATOM	2835	CB	ARG B 436	32.757	44.830	77.483	1.00	52.16	C
ATOM	2836	CG	ARG B 436	31.286	44.952	77.889	1.00	54.69	C
ATOM	2837	CD	ARG B 436	31.216	44.776	79.434	1.00	59.05	C
ATOM	2838	NE	ARG B 436	31.860	43.579	79.897	1.00	61.87	N
ATOM	2839	CZ	ARG B 436	32.929	43.286	80.607	1.00	64.18	C
ATOM	2840	NH1	ARG B 436	33.725	44.245	81.102	1.00	67.05	N
ATOM	2841	NH2	ARG B 436	33.260	42.010	80.867	1.00	60.90	N
ATOM	2842	N	MET B 437	34.545	46.793	76.339	1.00	52.85	N
ATOM	2843	CA	MET B 437	35.013	48.137	76.084	1.00	56.56	C
ATOM	2844	C	MET B 437	34.892	48.497	74.611	1.00	54.67	C
ATOM	2845	O	MET B 437	34.292	49.542	74.301	1.00	56.44	O
ATOM	2846	CB	MET B 437	36.446	48.210	76.590	1.00	63.56	C
ATOM	2847	CG	MET B 437	36.614	49.111	77.788	1.00	74.21	C
ATOM	2848	SD	MET B 437	38.262	48.956	78.509	1.00	84.59	S
ATOM	2849	CE	MET B 437	39.287	49.222	77.049	1.00	81.39	C
ATOM	2850	N	MET B 438	35.398	47.750	73.631	1.00	49.34	N
ATOM	2851	CA	MET B 438	35.281	48.213	72.255	1.00	47.33	C
ATOM	2852	C	MET B 438	33.977	47.842	71.604	1.00	46.47	C
ATOM	2853	O	MET B 438	33.850	47.985	70.374	1.00	46.26	O
ATOM	2854	CB	MET B 438	36.371	47.632	71.348	1.00	46.13	C
ATOM	2855	CG	MET B 438	37.616	47.220	72.115	1.00	44.79	C
ATOM	2856	SD	MET B 438	38.883	46.590	71.100	1.00	46.76	S
ATOM	2857	CE	MET B 438	38.508	47.061	69.426	1.00	42.55	C
ATOM	2858	N	ASN B 439	33.010	47.339	72.341	1.00	45.12	N
ATOM	2859	CA	ASN B 439	31.769	46.909	71.719	1.00	47.08	C
ATOM	2860	C	ASN B 439	32.030	45.961	70.560	1.00	42.87	C
ATOM	2861	O	ASN B 439	31.427	46.170	69.532	1.00	38.37	O
ATOM	2862	CB	ASN B 439	30.894	48.043	71.160	1.00	54.41	C
ATOM	2863	CG	ASN B 439	30.681	49.113	72.228	1.00	62.82	C
ATOM	2864	OD1	ASN B 439	30.400	48.772	73.391	1.00	68.45	O
ATOM	2865	ND2	ASN B 439	30.853	50.398	71.948	1.00	63.44	N
ATOM	2866	N	LEU B 440	32.836	44.915	70.767	1.00	40.15	N
ATOM	2867	CA	LEU B 440	33.036	43.990	69.681	1.00	38.02	C
ATOM	2868	C	LEU B 440	31.700	43.440	69.201	1.00	39.56	C
ATOM	2869	O	LEU B 440	30.812	43.082	69.978	1.00	39.57	O
ATOM	2870	CB	LEU B 440	33.945	42.860	70.083	1.00	39.03	C
ATOM	2871	CG	LEU B 440	34.095	41.816	68.957	1.00	38.64	C
ATOM	2872	CD1	LEU B 440	34.882	42.503	67.863	1.00	40.77	C
ATOM	2873	CD2	LEU B 440	34.781	40.613	69.567	1.00	40.57	C
ATOM	2874	N	GLN B 441	31.563	43.417	67.890	1.00	40.69	N
ATOM	2875	CA	GLN B 441	30.317	43.001	67.272	1.00	40.46	C
ATOM	2876	C	GLN B 441	30.476	41.572	66.796	1.00	41.61	C
ATOM	2877	O	GLN B 441	31.573	41.135	66.435	1.00	42.47	O
ATOM	2878	CB	GLN B 441	29.952	43.919	66.129	1.00	43.62	C
ATOM	2879	CG	GLN B 441	29.793	45.380	66.436	1.00	48.63	C

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ATOM	2880	CD	GLN B 441	28.646	45.620	67.426	1.00	53.79	C
ATOM	2881	OE1	GLN B 441	27.473	45.380	67.078	1.00	57.83	O
ATOM	2882	NE2	GLN B 441	28.952	46.095	68.623	1.00	50.24	N
ATOM	2883	N	GLY B 442	29.358	40.858	66.803	1.00	39.15	N
ATOM	2884	CA	GLY B 442	29.364	39.473	66.404	1.00	38.36	C
ATOM	2885	C	GLY B 442	29.980	39.287	65.030	1.00	38.59	C
ATOM	2886	O	GLY B 442	30.700	38.317	64.869	1.00	36.85	O
ATOM	2887	N	GLU B 443	29.673	40.200	64.107	1.00	39.06	N
ATOM	2888	CA	GLU B 443	30.225	40.130	62.778	1.00	40.77	C
ATOM	2889	C	GLU B 443	31.747	40.195	62.764	1.00	38.88	C
ATOM	2890	O	GLU B 443	32.341	39.502	61.958	1.00	40.31	O
ATOM	2891	CB	GLU B 443	29.725	41.274	61.885	1.00	43.92	C
ATOM	2892	CG	GLU B 443	28.280	40.999	61.489	1.00	49.93	C
ATOM	2893	CD	GLU B 443	27.289	41.423	62.556	1.00	52.01	C
ATOM	2894	OE1	GLU B 443	27.607	42.080	63.559	1.00	52.95	O
ATOM	2895	OE2	GLU B 443	26.103	41.072	62.367	1.00	56.50	O
ATOM	2896	N	GLU B 444	32.304	41.015	63.624	1.00	36.15	N
ATOM	2897	CA	GLU B 444	33.718	41.205	63.814	1.00	34.58	C
ATOM	2898	C	GLU B 444	34.304	39.991	64.512	1.00	33.55	C
ATOM	2899	O	GLU B 444	35.328	39.436	64.169	1.00	37.22	O
ATOM	2900	CB	GLU B 444	33.958	42.439	64.667	1.00	34.86	C
ATOM	2901	CG	GLU B 444	33.459	43.740	64.094	1.00	31.42	C
ATOM	2902	CD	GLU B 444	33.675	44.906	65.062	1.00	34.07	C
ATOM	2903	OE1	GLU B 444	33.134	44.858	66.203	1.00	30.06	O
ATOM	2904	OE2	GLU B 444	34.371	45.875	64.646	1.00	31.32	O
ATOM	2905	N	PHE B 445	33.608	39.484	65.490	1.00	36.24	N
ATOM	2906	CA	PHE B 445	34.003	38.295	66.254	1.00	35.58	C
ATOM	2907	C	PHE B 445	34.308	37.128	65.357	1.00	35.27	C
ATOM	2908	O	PHE B 445	35.313	36.412	65.412	1.00	40.19	O
ATOM	2909	CB	PHE B 445	32.830	37.907	67.202	1.00	29.13	C
ATOM	2910	CG	PHE B 445	32.976	36.563	67.791	1.00	25.96	C
ATOM	2911	CD1	PHE B 445	34.034	36.211	68.566	1.00	25.60	C
ATOM	2912	CD2	PHE B 445	32.009	35.585	67.537	1.00	28.36	C
ATOM	2913	CE1	PHE B 445	34.112	34.897	69.072	1.00	30.26	C
ATOM	2914	CE2	PHE B 445	32.014	34.314	68.054	1.00	26.68	C
ATOM	2915	CZ	PHE B 445	33.127	33.951	68.828	1.00	28.70	C
ATOM	2916	N	VAL B 446	33.340	36.823	64.553	1.00	34.10	N
ATOM	2917	CA	VAL B 446	33.325	35.647	63.645	1.00	34.65	C
ATOM	2918	C	VAL B 446	34.441	35.755	62.659	1.00	35.98	C
ATOM	2919	O	VAL B 446	35.089	34.817	62.161	1.00	35.51	O
ATOM	2920	CB	VAL B 446	31.855	35.683	63.194	1.00	34.90	C
ATOM	2921	CG1	VAL B 446	31.527	35.886	61.769	1.00	32.60	C
ATOM	2922	CG2	VAL B 446	31.123	34.554	63.911	1.00	32.13	C
ATOM	2923	N	CYS B 447	34.751	37.011	62.335	1.00	36.12	N
ATOM	2924	CA	CYS B 447	35.830	37.341	61.416	1.00	36.00	C
ATOM	2925	C	CYS B 447	37.163	37.010	62.071	1.00	37.62	C
ATOM	2926	O	CYS B 447	38.056	36.366	61.498	1.00	37.88	O
ATOM	2927	CB	CYS B 447	35.638	38.810	61.119	1.00	35.26	C
ATOM	2928	SG	CYS B 447	34.873	39.112	59.520	1.00	36.98	S

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ATOM	2929	N	LEU B 448	37.302	37.451	63.335	00	36.74	N
ATOM	2930	CA	LEU B 448	38.479	37.185	64.155	00	32.62	C
ATOM	2931	C	LEU B 448	38.691	35.712	64.444	1.00	32.23	C
ATOM	2932	O	LEU B 448	39.852	35.258	64.471	1.00	33.33	O
ATOM	2933	CB	LEU B 448	38.420	37.971	65.400	1.00	35.13	C
ATOM	2934	CG	LEU B 448	38.540	39.490	65.512	1.00	32.37	C
ATOM	2935	CD1	LEU B 448	38.938	39.710	66.999	1.00	33.43	C
ATOM	2936	CD2	LEU B 448	39.657	40.004	64.637	1.00	33.31	C
ATOM	2937	N	LYS B 449	37.641	34.906	64.606	1.00	31.66	N
ATOM	2938	CA	LYS B 449	37.843	33.470	64.808	1.00	30.93	C
ATOM	2939	C	LYS B 449	38.462	32.865	63.553	1.00	29.14	C
ATOM	2940	O	LYS B 449	39.333	32.064	63.717	1.00	32.42	O
ATOM	2941	CB	LYS B 449	36.623	32.626	65.068	1.00	31.04	C
ATOM	2942	CG	LYS B 449	36.177	32.488	66.496	1.00	36.23	C
ATOM	2943	CD	LYS B 449	35.310	31.208	66.665	1.00	34.18	C
ATOM	2944	CE	LYS B 449	33.890	31.672	66.346	1.00	33.96	C
ATOM	2945	NZ	LYS B 449	32.896	30.611	66.205	1.00	32.13	N
ATOM	2946	N	SER B 450	37.937	33.118	62.384	1.00	29.89	N
ATOM	2947	CA	SER B 450	38.485	32.554	61.162	1.00	33.15	C
ATOM	2948	C	SER B 450	39.948	32.941	60.947	1.00	33.99	C
ATOM	2949	O	SER B 450	40.741	32.059	60.569	1.00	36.13	O
ATOM	2950	CB	SER B 450	37.677	33.112	59.971	1.00	35.66	C
ATOM	2951	OG	SER B 450	36.448	32.390	59.964	1.00	42.36	O
ATOM	2952	N	ILE B 451	40.291	34.212	61.179	1.00	28.73	N
ATOM	2953	CA	ILE B 451	41.689	34.636	61.077	1.00	28.97	C
ATOM	2954	C	ILE B 451	42.542	33.780	62.024	1.00	30.60	C
ATOM	2955	O	ILE B 451	43.622	33.306	61.687	1.00	34.48	O
ATOM	2956	CB	ILE B 451	41.877	36.109	61.474	1.00	26.02	C
ATOM	2957	CG1	ILE B 451	41.408	37.037	60.331	1.00	23.22	C
ATOM	2958	CG2	ILE B 451	43.361	36.401	61.672	1.00	29.64	C
ATOM	2959	CD1	ILE B 451	41.256	38.461	60.801	1.00	18.98	C
ATOM	2960	N	ILE B 452	42.099	33.533	63.249	1.00	30.12	N
ATOM	2961	CA	ILE B 452	42.843	32.711	64.175	1.00	29.93	C
ATOM	2962	C	ILE B 452	43.056	31.337	63.559	1.00	31.42	C
ATOM	2963	O	ILE B 452	44.195	30.815	63.582	1.00	34.08	O
ATOM	2964	CB	ILE B 452	42.144	32.606	65.550	1.00	28.86	C
ATOM	2965	CG1	ILE B 452	42.345	33.913	66.330	1.00	26.71	C
ATOM	2966	CG2	ILE B 452	42.556	31.429	66.392	1.00	22.07	C
ATOM	2967	CD1	ILE B 452	41.556	33.907	67.645	1.00	25.52	C
ATOM	2968	N	LEU B 453	42.019	30.719	63.057	1.00	30.00	N
ATOM	2969	CA	LEU B 453	42.178	29.363	62.504	1.00	33.56	C
ATOM	2970	C	LEU B 453	43.230	29.315	61.378	1.00	34.89	C
ATOM	2971	O	LEU B 453	44.116	28.440	61.327	1.00	31.76	O
ATOM	2972	CB	LEU B 453	40.849	28.894	61.906	1.00	31.42	C
ATOM	2973	CG	LEU B 453	40.852	27.667	61.019	1.00	28.92	C
ATOM	2974	CD1	LEU B 453	41.063	26.366	61.798	1.00	24.08	C
ATOM	2975	CD2	LEU B 453	39.503	27.591	60.278	1.00	30.58	C
ATOM	2976	N	LEU B 454	43.077	30.262	60.454	1.00	34.10	N
ATOM	2977	CA	LEU B 454	43.928	30.393	59.312	1.00	35.40	C

ATOM	2978	C	LEU B 454	45.329	30.887	59.636	1.00	39.86	C
ATOM	2979	O	LEU B 454	46.287	30.523	58.937	1.00	39.77	O
ATOM	2980	CB	LEU B 454	43.314	31.353	58.268	1.00	32.57	C
ATOM	2981	CG	LEU B 454	41.999	30.904	57.601	1.00	33.34	C
ATOM	2982	CD1	LEU B 454	41.532	31.847	56.510	1.00	26.62	C
ATOM	2983	CD2	LEU B 454	42.117	29.493	57.047	1.00	28.40	C
ATOM	2984	N	AASN B 455	45.506	31.698	60.663	0.50	40.80	N
ATOM	2985	N	BASN B 455	45.505	31.713	60.659	0.50	39.00	N
ATOM	2986	CA	AASN B 455	46.826	32.232	60.918	0.50	44.45	C
ATOM	2987	CA	BASN B 455	46.823	32.228	60.988	0.50	42.13	C
ATOM	2988	C	AASN B 455	47.721	31.543	61.896	0.50	48.50	C
ATOM	2989	C	BASN B 455	47.552	31.355	61.994	0.50	45.77	C
ATOM	2990	O	AASN B 455	48.957	31.521	61.719	0.50	52.42	O
ATOM	2991	O	BASN B 455	48.711	31.560	62.360	0.50	46.57	O
ATOM	2992	CB	AASN B 455	46.579	33.691	61.340	0.50	44.72	C
ATOM	2993	CB	BASN B 455	46.663	33.637	61.558	0.50	42.66	C
ATOM	2994	CG	AASN B 455	47.816	34.397	61.821	0.50	44.73	C
ATOM	2995	CG	BASN B 455	47.987	34.343	61.746	0.50	42.68	C
ATOM	2996	OD1	AASN B 455	48.924	34.100	61.405	0.50	45.12	O
ATOM	2997	OD1	BASN B 455	48.974	33.982	61.119	0.50	44.09	O
ATOM	2998	ND2	AASN B 455	47.656	35.361	62.705	0.50	45.67	N
ATOM	2999	ND2	BASN B 455	48.020	35.344	62.598	0.50	43.18	N
ATOM	3000	N	ASER B 456	47.242	30.980	62.984	0.50	51.54	N
ATOM	3001	N	BSER B 456	46.887	30.325	62.491	0.50	49.72	N
ATOM	3002	CA	ASER B 456	48.125	30.420	63.995	0.50	54.01	C
ATOM	3003	CA	BSER B 456	47.432	29.485	63.522	0.50	54.52	C
ATOM	3004	C	ASER B 456	48.955	29.234	63.588	0.50	58.60	C
ATOM	3005	C	BSER B 456	48.818	28.950	63.201	0.50	60.78	C
ATOM	3006	O	ASER B 456	49.898	28.829	64.335	0.50	57.41	O
ATOM	3007	O	BSER B 456	49.844	29.324	63.754	0.50	62.69	O
ATOM	3008	CB	ASER B 456	47.350	30.245	65.308	0.50	50.29	C
ATOM	3009	CB	BSER B 456	46.527	28.285	63.828	0.50	50.85	C
ATOM	3010	OG	ASER B 456	46.445	31.314	65.518	0.50	41.88	O
ATOM	3011	OG	BSER B 456	46.159	27.590	62.678	0.50	45.14	O
ATOM	3012	N	AGLY B 457	48.724	28.658	62.415	0.50	63.63	N
ATOM	3013	N	BGLY B 457	48.787	27.945	62.347	0.50	67.52	N
ATOM	3014	CA	AGLY B 457	49.556	27.489	62.049	0.50	71.82	C
ATOM	3015	CA	BGLY B 457	49.997	27.241	61.920	0.50	73.86	C
ATOM	3016	C	AGLY B 457	50.083	27.632	60.637	0.50	77.18	C
ATOM	3017	C	BGLY B 457	50.132	27.517	60.423	0.50	78.37	C
ATOM	3018	O	AGLY B 457	50.595	26.685	60.048	0.50	78.85	O
ATOM	3019	O	BGLY B 457	49.940	26.617	59.607	0.50	80.12	O
ATOM	3020	N	VAL B 458	50.000	28.836	60.125	1.00	80.90	N
ATOM	3021	CA	VAL B 458	50.366	29.212	58.759	1.00	87.60	C
ATOM	3022	C	VAL B 458	51.846	29.166	58.508	1.00	94.17	C
ATOM	3023	O	VAL B 458	52.311	29.290	57.365	1.00	95.12	O
ATOM	3024	CB	VAL B 458	49.602	30.499	58.423	1.00	84.54	C
ATOM	3025	CG1	VAL B 458	50.020	31.602	59.354	1.00	82.92	C
ATOM	3026	CG2	VAL B 458	49.690	30.898	56.969	1.00	84.72	C

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ATOM	3027	N	TYR B 459	52.686	28.951	59.520	1.00101.08	N
ATOM	3028	CA	TYR B 459	54.118	28.829	59.478	1.00105.58	C
ATOM	3029	C	TYR B 459	54.628	27.383	59.505	1.00106.66	C
ATOM	3030	O	TYR B 459	55.476	27.053	60.360	1.00106.92	O
ATOM	3031	CB	TYR B 459	54.759	29.538	60.691	1.00108.78	C
ATOM	3032	CG	TYR B 459	54.932	31.015	60.441	1.00112.75	C
ATOM	3033	CD1	TYR B 459	54.140	31.670	59.507	1.00114.02	C
ATOM	3034	CD2	TYR B 459	55.888	31.764	61.118	1.00113.67	C
ATOM	3035	CE1	TYR B 459	54.269	33.009	59.243	1.00114.56	C
ATOM	3036	CE2	TYR B 459	56.030	33.115	60.860	1.00114.48	C
ATOM	3037	CZ	TYR B 459	55.220	33.728	59.937	1.00114.74	C
ATOM	3038	OH	TYR B 459	55.309	35.074	59.662	1.00115.64	O
ATOM	3039	N	LEU B 469	53.455	26.042	47.196	1.00114.47	N
ATOM	3040	CA	LEU B 469	53.703	27.415	47.649	1.00113.63	C
ATOM	3041	C	LEU B 469	52.595	28.339	47.164	1.00111.18	C
ATOM	3042	O	LEU B 469	52.452	29.481	47.572	1.00110.61	O
ATOM	3043	CB	LEU B 469	55.056	27.927	47.145	1.00114.74	C
ATOM	3047	N	GLU B 470	51.735	27.749	46.323	1.00108.99	N
ATOM	3048	CA	GLU B 470	50.552	28.514	45.891	1.00107.74	C
ATOM	3049	C	GLU B 470	49.492	28.303	46.983	1.00106.21	C
ATOM	3050	O	GLU B 470	48.424	28.886	46.982	1.00106.32	O
ATOM	3051	CB	GLU B 470	50.083	28.142	44.510	1.00107.28	C
ATOM	3056	N	GLU B 471	49.832	27.431	47.915	1.00103.94	N
ATOM	3057	CA	GLU B 471	49.046	27.060	49.063	1.00102.02	C
ATOM	3058	C	GLU B 471	49.190	28.135	50.131	1.00 99.15	C
ATOM	3059	O	GLU B 471	48.228	28.784	50.542	1.00100.18	O
ATOM	3060	CB	GLU B 471	49.505	25.692	49.591	1.00102.87	C
ATOM	3065	N	LYS B 472	50.438	28.412	50.518	1.00 95.05	N
ATOM	3066	CA	LYS B 472	50.694	29.474	51.488	1.00 90.18	C
ATOM	3067	C	LYS B 472	49.906	30.708	51.018	1.00 85.61	C
ATOM	3068	O	LYS B 472	49.154	31.313	51.764	1.00 85.79	O
ATOM	3069	CB	LYS B 472	52.164	29.863	51.584	1.00 90.78	C
ATOM	3074	N	ASP B 473	50.106	30.995	49.743	1.00 79.96	N
ATOM	3075	CA	ASP B 473	49.463	32.091	49.096	1.00 76.18	C
ATOM	3076	C	ASP B 473	47.971	32.104	49.117	1.00 70.30	C
ATOM	3077	O	ASP B 473	47.343	33.158	49.225	1.00 68.00	O
ATOM	3078	CB	ASP B 473	50.058	32.230	47.670	1.00 79.82	C
ATOM	3079	CG	ASP B 473	50.812	33.579	47.744	1.00 85.00	C
ATOM	3080	OD1	ASP B 473	51.707	33.695	48.625	1.00 87.11	O
ATOM	3081	OD2	ASP B 473	50.338	34.479	47.015	1.00 86.01	O
ATOM	3082	N	HIS B 474	47.315	30.960	49.042	1.00 67.17	N
ATOM	3083	CA	HIS B 474	45.859	30.919	49.049	1.00 64.04	C
ATOM	3084	C	HIS B 474	45.313	31.500	50.359	1.00 59.13	C
ATOM	3085	O	HIS B 474	44.512	32.421	50.406	1.00 54.26	O
ATOM	3086	CB	HIS B 474	45.373	29.472	48.872	1.00 65.44	C
ATOM	3087	CG	HIS B 474	43.869	29.373	48.910	1.00 66.08	C
ATOM	3088	ND1	HIS B 474	43.042	30.096	48.057	1.00 64.73	N
ATOM	3089	CD2	HIS B 474	43.085	28.640	49.749	1.00 63.86	C
ATOM	3090	CE1	HIS B 474	41.788	29.791	48.371	1.00 65.57	C

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ATOM	3091	NE2 HIS B 474	41.798	28.914	49.383	1.00	65.82	N
ATOM	3092	N ILE B 475	45.796	30.880	51.428	1.00	54.85	N
ATOM	3093	CA ILE B 475	45.486	31.241	52.789	1.00	52.82	C
ATOM	3094	C ILE B 475	45.684	32.719	52.997	1.00	52.67	C
ATOM	3095	O ILE B 475	44.795	33.382	53.573	1.00	52.33	O
ATOM	3096	CB ILE B 475	46.369	30.407	53.743	1.00	53.77	C
ATOM	3097	CG1 ILE B 475	45.613	29.092	54.003	1.00	55.72	C
ATOM	3098	CG2 ILE B 475	46.702	31.124	55.023	1.00	50.98	C
ATOM	3099	CD1 ILE B 475	45.981	28.459	55.332	1.00	57.41	C
ATOM	3100	N HIS B 476	46.807	33.259	52.541	1.00	51.23	N
ATOM	3101	CA HIS B 476	47.093	34.668	52.664	1.00	56.36	C
ATOM	3102	C HIS B 476	46.068	35.544	51.960	1.00	57.23	C
ATOM	3103	O HIS B 476	45.771	36.671	52.356	1.00	59.56	O
ATOM	3104	CB HIS B 476	48.489	34.972	52.119	1.00	62.85	C
ATOM	3105	CG HIS B 476	49.496	34.811	53.217	1.00	73.21	C
ATOM	3106	ND1 HIS B 476	50.291	33.686	53.347	1.00	76.61	N
ATOM	3107	CD2 HIS B 476	49.789	35.602	54.290	1.00	75.57	C
ATOM	3108	CE1 HIS B 476	51.057	33.808	54.416	1.00	76.91	C
ATOM	3109	NE2 HIS B 476	50.750	34.949	55.019	1.00	76.75	N
ATOM	3110	N ARG B 477	45.511	35.068	50.862	1.00	55.52	N
ATOM	3111	CA ARG B 477	44.499	35.781	50.123	1.00	55.00	C
ATOM	3112	C ARG B 477	43.171	35.727	50.840	1.00	51.68	C
ATOM	3113	O ARG B 477	42.383	36.674	50.801	1.00	50.49	O
ATOM	3114	CB ARG B 477	44.433	35.176	48.720	1.00	60.20	C
ATOM	3115	CG ARG B 477	45.762	35.404	47.984	1.00	64.22	C
ATOM	3116	CD ARG B 477	45.480	35.533	46.484	1.00	68.27	C
ATOM	3117	NE ARG B 477	46.218	34.503	45.754	1.00	71.88	N
ATOM	3121	N VAL B 478	42.939	34.574	51.496	1.00	48.24	N
ATOM	3122	CA VAL B 478	41.689	34.417	52.255	1.00	45.48	C
ATOM	3123	C VAL B 478	41.733	35.408	53.425	1.00	43.33	C
ATOM	3124	O VAL B 478	40.824	36.191	53.631	1.00	40.18	O
ATOM	3125	CB VAL B 478	41.500	33.007	52.799	1.00	44.55	C
ATOM	3126	CG1 VAL B 478	40.250	32.944	53.660	1.00	42.28	C
ATOM	3127	CG2 VAL B 478	41.454	31.965	51.700	1.00	42.27	C
ATOM	3128	N LEU B 479	42.928	35.425	54.060	1.00	42.57	N
ATOM	3129	CA LEU B 479	43.196	36.400	55.112	1.00	40.27	C
ATOM	3130	C LEU B 479	43.018	37.825	54.643	1.00	38.95	C
ATOM	3131	O LEU B 479	42.407	38.618	55.374	1.00	44.89	O
ATOM	3132	CB LEU B 479	44.598	36.247	55.697	1.00	38.43	C
ATOM	3133	CG LEU B 479	44.794	35.057	56.646	1.00	36.80	C
ATOM	3134	CD1 LEU B 479	46.272	34.775	56.867	1.00	36.30	C
ATOM	3135	CD2 LEU B 479	44.083	35.213	57.942	1.00	32.80	C
ATOM	3136	N ASP B 480	43.481	38.218	53.498	1.00	37.41	N
ATOM	3137	CA ASP B 480	43.276	39.561	52.966	1.00	39.12	C
ATOM	3138	C ASP B 480	41.776	39.859	52.822	1.00	39.72	C
ATOM	3139	O ASP B 480	41.244	40.935	53.171	1.00	37.31	O
ATOM	3140	CB ASP B 480	43.919	39.686	51.598	1.00	40.28	C
ATOM	3141	CG ASP B 480	45.359	40.103	51.613	1.00	43.97	C
ATOM	3142	OD1 ASP B 480	46.014	40.191	52.637	1.00	45.55	O

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ATOM	3143	OD2 ASP B 480	45.934	40.346	50.526	1.00	50.28	O
ATOM	3144	N LYS B 481	41.060	38.846	52.311	1.00	37.19	N
ATOM	3145	CA LYS B 481	39.626	39.005	52.153	1.00	39.36	C
ATOM	3146	C LYS B 481	38.942	39.231	53.490	1.00	37.52	C
ATOM	3147	O LYS B 481	38.052	40.083	53.640	1.00	33.55	O
ATOM	3148	CB LYS B 481	39.076	37.807	51.405	1.00	44.24	C
ATOM	3149	CG LYS B 481	37.767	38.132	50.733	1.00	51.43	C
ATOM	3150	CD LYS B 481	37.705	37.779	49.253	1.00	54.23	C
ATOM	3151	CE LYS B 481	36.592	38.657	48.653	1.00	55.57	C
ATOM	3152	NZ LYS B 481	37.061	39.411	47.470	1.00	60.01	N
ATOM	3153	N ILE B 482	39.455	38.536	54.537	1.00	35.79	N
ATOM	3154	CA ILE B 482	38.872	38.765	55.867	1.00	33.69	C
ATOM	3155	C ILE B 482	39.141	40.146	56.389	1.00	34.23	C
ATOM	3156	O ILE B 482	38.239	40.803	56.970	1.00	35.10	O
ATOM	3157	CB ILE B 482	39.092	37.644	56.819	1.00	31.16	C
ATOM	3158	CG1 ILE B 482	38.922	36.299	56.067	1.00	24.05	C
ATOM	3159	CG2 ILE B 482	38.101	37.675	57.989	1.00	31.64	C
ATOM	3160	CD1 ILE B 482	38.933	35.211	57.089	1.00	25.98	C
ATOM	3161	N THR B 483	40.332	40.657	56.099	1.00	33.25	N
ATOM	3162	CA THR B 483	40.643	42.033	56.499	1.00	33.50	C
ATOM	3163	C THR B 483	39.644	42.958	55.811	1.00	35.50	C
ATOM	3164	O THR B 483	39.015	43.787	56.417	1.00	36.34	O
ATOM	3165	CB THR B 483	42.066	42.428	56.055	1.00	32.03	C
ATOM	3166	OG1 THR B 483	43.012	41.542	56.714	1.00	31.73	O
ATOM	3167	CG2 THR B 483	42.368	43.871	56.435	1.00	23.76	C
ATOM	3168	N ASP B 484	39.491	42.788	54.498	1.00	39.87	N
ATOM	3169	CA ASP B 484	38.526	43.498	53.678	1.00	39.14	C
ATOM	3170	C ASP B 484	37.150	43.443	54.309	1.00	38.08	C
ATOM	3171	O ASP B 484	36.551	44.501	54.469	1.00	40.14	O
ATOM	3172	CB ASP B 484	38.415	42.904	52.293	1.00	42.39	C
ATOM	3173	CG ASP B 484	39.624	43.139	51.453	1.00	45.80	C
ATOM	3174	OD1 ASP B 484	40.287	44.189	51.613	1.00	51.95	O
ATOM	3175	OD2 ASP B 484	39.958	42.283	50.636	1.00	48.98	O
ATOM	3176	N THR B 485	36.702	42.236	54.635	1.00	36.36	N
ATOM	3177	CA THR B 485	35.387	42.096	55.278	1.00	36.85	C
ATOM	3178	C THR B 485	35.396	42.874	56.589	1.00	39.62	C
ATOM	3179	O THR B 485	34.469	43.641	56.847	1.00	42.09	O
ATOM	3180	CB THR B 485	35.092	40.639	55.602	1.00	35.78	C
ATOM	3181	OG1 THR B 485	35.425	39.830	54.489	1.00	38.41	O
ATOM	3182	CG2 THR B 485	33.687	40.329	56.033	1.00	31.37	C
ATOM	3183	N LEU B 486	36.455	42.687	57.410	1.00	40.70	N
ATOM	3184	CA LEU B 486	36.524	43.442	58.661	1.00	39.17	C
ATOM	3185	C LEU B 486	36.357	44.937	58.426	1.00	36.46	C
ATOM	3186	O LEU B 486	35.574	45.569	59.118	1.00	34.47	O
ATOM	3187	CB LEU B 486	37.819	43.240	59.397	1.00	37.63	C
ATOM	3188	CG LEU B 486	37.839	42.538	60.735	1.00	39.49	C
ATOM	3189	CD1 LEU B 486	36.471	42.392	61.383	1.00	40.00	C
ATOM	3190	CD2 LEU B 486	38.533	41.180	60.628	1.00	35.73	C
ATOM	3191	N ILE B 487	37.092	45.487	57.475	1.00	37.80	N

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ATOM	3192	CA	ILE B 487	36.971	46.933	57.230	1.00	41.68	C
ATOM	3193	C	ILE B 487	35.587	47.346	56.741	1.00	40.87	C
ATOM	3194	O	ILE B 487	35.023	48.354	57.126	1.00	37.88	O
ATOM	3195	CB	ILE B 487	38.025	47.395	56.224	1.00	40.44	C
ATOM	3196	CG1	ILE B 487	39.414	47.123	56.770	1.00	39.53	C
ATOM	3197	CG2	ILE B 487	37.795	48.871	55.903	1.00	39.33	C
ATOM	3198	CD1	ILE B 487	39.851	48.181	57.775	1.00	41.18	C
ATOM	3199	N	HIS B 488	35.038	46.545	55.855	1.00	45.86	N
ATOM	3200	CA	HIS B 488	33.689	46.702	55.338	1.00	47.90	C
ATOM	3201	C	HIS B 488	32.692	46.897	56.470	1.00	45.88	C
ATOM	3202	O	HIS B 488	31.996	47.914	56.583	1.00	46.37	O
ATOM	3203	CB	HIS B 488	33.346	45.498	54.470	1.00	50.31	C
ATOM	3204	CG	HIS B 488	31.959	45.674	53.895	1.00	56.89	C
ATOM	3205	ND1	HIS B 488	30.859	44.934	54.302	1.00	57.87	N
ATOM	3206	CD2	HIS B 488	31.534	46.527	52.925	1.00	56.23	C
ATOM	3207	CE1	HIS B 488	29.809	45.323	53.611	1.00	58.24	C
ATOM	3208	NE2	HIS B 488	30.211	46.273	52.783	1.00	58.77	N
ATOM	3209	N	LEU B 489	32.631	45.959	57.417	1.00	43.00	N
ATOM	3210	CA	LEU B 489	31.743	46.092	58.547	1.00	39.11	C
ATOM	3211	C	LEU B 489	31.981	47.409	59.261	1.00	39.92	C
ATOM	3212	O	LEU B 489	31.040	48.016	59.786	1.00	39.75	O
ATOM	3213	CB	LEU B 489	31.976	44.978	59.566	1.00	34.08	C
ATOM	3214	CG	LEU B 489	31.722	43.599	59.030	1.00	33.19	C
ATOM	3215	CD1	LEU B 489	32.515	42.588	59.850	1.00	37.93	C
ATOM	3216	CD2	LEU B 489	30.236	43.277	59.097	1.00	32.54	C
ATOM	3217	N	MET B 490	33.240	47.814	59.347	1.00	43.79	N
ATOM	3218	CA	MET B 490	33.547	49.059	60.077	1.00	46.64	C
ATOM	3219	C	MET B 490	33.001	50.287	59.363	1.00	44.69	C
ATOM	3220	O	MET B 490	32.379	51.103	60.020	1.00	39.83	O
ATOM	3221	CB	MET B 490	35.010	49.207	60.413	1.00	45.72	C
ATOM	3222	CG	MET B 490	35.437	48.611	61.751	1.00	44.92	C
ATOM	3223	SD	MET B 490	37.180	48.060	61.697	1.00	44.63	S
ATOM	3224	CE	MET B 490	37.054	46.523	62.575	1.00	44.78	C
ATOM	3225	N	ALA B 491	33.208	50.332	58.056	1.00	48.14	N
ATOM	3226	CA	ALA B 491	32.766	51.454	57.213	1.00	49.71	C
ATOM	3227	C	ALA B 491	31.248	51.491	57.282	1.00	55.03	C
ATOM	3228	O	ALA B 491	30.614	52.476	57.607	1.00	56.54	O
ATOM	3229	CB	ALA B 491	33.213	51.273	55.791	1.00	42.64	C
ATOM	3230	N	LYS B 492	30.681	50.309	57.031	1.00	59.07	N
ATOM	3231	CA	LYS B 492	29.233	50.124	57.088	1.00	61.88	C
ATOM	3232	C	LYS B 492	28.694	50.716	58.374	1.00	61.14	C
ATOM	3233	O	LYS B 492	27.738	51.490	58.326	1.00	65.25	O
ATOM	3234	CB	LYS B 492	28.912	48.648	56.973	1.00	65.85	C
ATOM	3235	CG	LYS B 492	27.487	48.224	56.873	1.00	70.73	C
ATOM	3236	CD	LYS B 492	27.335	46.970	56.007	1.00	75.73	C
ATOM	3237	CE	LYS B 492	25.939	47.010	55.356	1.00	79.99	C
ATOM	3238	NZ	LYS B 492	25.382	45.631	55.150	1.00	83.64	N
ATOM	3239	N	ALA B 493	29.300	50.465	59.505	1.00	59.06	N
ATOM	3240	CA	ALA B 493	28.979	50.984	60.803	1.00	58.83	C

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ATOM	3241	C	ALA B 493	29.194	52.493	60.929	1.00	60.61	C
ATOM	3242	O	ALA B 493	28.820	53.090	61.935	1.00	59.39	O
ATOM	3243	CB	ALA B 493	29.902	50.311	61.828	1.00	58.13	C
ATOM	3244	N	GLY B 494	29.881	53.090	59.960	1.00	60.85	N
ATOM	3245	CA	GLY B 494	30.149	54.469	59.878	1.00	62.54	C
ATOM	3246	C	GLY B 494	31.387	54.995	60.525	1.00	62.95	C
ATOM	3247	O	GLY B 494	31.413	56.184	60.897	1.00	66.15	O
ATOM	3248	N	LEU B 495	32.414	54.173	60.671	1.00	60.31	N
ATOM	3249	CA	LEU B 495	33.613	54.731	61.339	1.00	55.79	C
ATOM	3250	C	LEU B 495	34.347	55.492	60.238	1.00	56.99	C
ATOM	3251	O	LEU B 495	34.122	55.127	59.088	1.00	57.23	O
ATOM	3252	CB	LEU B 495	34.497	53.673	61.886	1.00	52.94	C
ATOM	3253	CG	LEU B 495	34.054	52.508	62.694	1.00	50.03	C
ATOM	3254	CD1	LEU B 495	35.176	52.086	63.635	1.00	50.56	C
ATOM	3255	CD2	LEU B 495	32.772	52.721	63.431	1.00	48.72	C
ATOM	3256	N	THR B 496	35.223	56.401	60.624	1.00	57.24	N
ATOM	3257	CA	THR B 496	35.951	57.132	59.564	1.00	55.80	C
ATOM	3258	C	THR B 496	37.014	56.202	59.035	1.00	55.30	C
ATOM	3259	O	THR B 496	37.224	55.107	59.559	1.00	57.11	O
ATOM	3260	CB	THR B 496	36.513	58.458	60.055	1.00	54.98	C
ATOM	3261	OG1	THR B 496	37.439	58.342	61.134	1.00	54.51	O
ATOM	3262	CG2	THR B 496	35.368	59.344	60.587	1.00	56.74	C
ATOM	3263	N	LEU B 497	37.732	56.636	58.027	1.00	56.81	N
ATOM	3264	CA	LEU B 497	38.809	55.838	57.461	1.00	58.93	C
ATOM	3265	C	LEU B 497	39.843	55.574	58.546	1.00	59.46	C
ATOM	3266	O	LEU B 497	40.349	54.476	58.724	1.00	59.95	O
ATOM	3267	CB	LEU B 497	39.406	56.537	56.248	1.00	57.10	C
ATOM	3268	CG	LEU B 497	38.864	55.921	54.946	1.00	60.97	C
ATOM	3269	CD1	LEU B 497	38.737	56.909	53.812	1.00	61.29	C
ATOM	3270	CD2	LEU B 497	39.749	54.735	54.590	1.00	61.42	C
ATOM	3271	N	GLN B 498	40.116	56.642	59.298	1.00	60.04	N
ATOM	3272	CA	GLN B 498	41.126	56.577	60.346	1.00	58.66	C
ATOM	3273	C	GLN B 498	40.655	55.619	61.429	1.00	56.58	C
ATOM	3274	O	GLN B 498	41.383	54.779	61.906	1.00	54.84	O
ATOM	3275	CB	GLN B 498	41.322	57.959	60.954	1.00	59.96	C
ATOM	3276	CG	GLN B 498	42.003	57.852	62.316	1.00	64.82	C
ATOM	3277	CD	GLN B 498	42.807	59.111	62.587	1.00	66.88	C
ATOM	3278	OE1	GLN B 498	42.325	59.914	63.377	1.00	70.04	O
ATOM	3279	NE2	GLN B 498	43.951	59.235	61.948	1.00	68.14	N
ATOM	3280	N	GLN B 499	39.387	55.786	61.796	1.00	56.24	N
ATOM	3281	CA	GLN B 499	38.822	54.914	62.829	1.00	56.35	C
ATOM	3282	C	GLN B 499	38.856	53.453	62.393	1.00	56.05	C
ATOM	3283	O	GLN B 499	39.074	52.610	63.264	1.00	57.20	O
ATOM	3284	CB	GLN B 499	37.424	55.348	63.149	1.00	55.66	C
ATOM	3285	CG	GLN B 499	37.327	56.721	63.773	1.00	56.83	C
ATOM	3286	CD	GLN B 499	35.871	56.986	64.130	1.00	58.69	C
ATOM	3287	OE1	GLN B 499	35.006	56.866	63.274	1.00	58.39	O
ATOM	3288	NE2	GLN B 499	35.642	57.324	65.385	1.00	61.19	N
ATOM	3289	N	GLN B 500	38.623	53.155	61.132	1.00	52.26	N

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ATOM	3290	CA	GLN B 500	38.721	51.832	60.580	1.00	48.06	C
ATOM	3291	C	GLN B 500	40.063	51.186	60.796	1.00	48.29	C
ATOM	3292	O	GLN B 500	40.155	50.095	61.389	1.00	51.62	O
ATOM	3293	CB	GLN B 500	38.513	51.894	59.041	1.00	45.29	C
ATOM	3294	CG	GLN B 500	37.067	51.860	58.683	1.00	45.42	C
ATOM	3295	CD	GLN B 500	36.618	52.564	57.441	1.00	45.44	C
ATOM	3296	OE1	GLN B 500	37.103	52.308	56.351	1.00	46.78	O
ATOM	3297	NE2	GLN B 500	35.648	53.468	57.589	1.00	44.47	N
ATOM	3298	N	AHIS B 501	41.170	51.777	60.317	0.50	46.65	N
ATOM	3299	N	BHIS B 501	41.099	51.854	60.328	0.50	47.93	N
ATOM	3300	CA	AHIS B 501	42.463	51.100	60.524	0.50	43.55	C
ATOM	3301	CA	BHIS B 501	42.477	51.385	60.430	0.50	46.45	C
ATOM	3302	C	AHIS B 501	42.770	50.998	62.015	0.50	44.08	C
ATOM	3303	C	BHIS B 501	42.918	51.257	61.881	0.50	45.96	C
ATOM	3304	O	AHIS B 501	43.503	50.096	62.434	0.50	46.22	O
ATOM	3305	O	BHIS B 501	43.586	50.264	62.211	0.50	47.87	O
ATOM	3306	CB	AHIS B 501	43.619	51.724	59.805	0.50	41.42	C
ATOM	3307	CB	BHIS B 501	43.367	52.356	59.651	0.50	47.09	C
ATOM	3308	CG	AHIS B 501	43.981	53.129	60.147	0.50	40.96	C
ATOM	3309	CG	BHIS B 501	43.020	52.436	58.188	0.50	48.40	C
ATOM	3310	ND1	AHIS B 501	44.259	54.067	59.171	0.50	41.42	N
ATOM	3311	ND1	BHIS B 501	42.555	51.328	57.498	0.50	48.78	N
ATOM	3312	CD2	AHIS B 501	44.121	53.774	61.328	0.50	40.78	C
ATOM	3313	CD2	BHIS B 501	43.114	53.436	57.281	0.50	46.35	C
ATOM	3314	CE1	AHIS B 501	44.534	55.223	59.764	0.50	43.40	C
ATOM	3315	CE1	BHIS B 501	42.368	51.660	56.234	0.50	48.60	C
ATOM	3316	NE2	AHIS B 501	44.438	55.078	61.079	0.50	40.95	N
ATOM	3317	NE2	BHIS B 501	42.705	52.928	56.081	0.50	46.13	N
ATOM	3318	N	GLN B 502	42.228	51.930	62.808	1.00	42.77	N
ATOM	3319	CA	GLN B 502	42.557	51.941	64.220	1.00	40.75	C
ATOM	3320	C	GLN B 502	41.919	50.773	64.947	1.00	39.12	C
ATOM	3321	O	GLN B 502	42.647	50.028	65.601	1.00	36.67	O
ATOM	3322	CB	GLN B 502	42.252	53.228	64.935	1.00	38.57	C
ATOM	3323	CG	GLN B 502	43.059	54.353	64.298	1.00	40.97	C
ATOM	3324	CD	GLN B 502	43.087	55.565	65.193	1.00	42.76	C
ATOM	3325	OE1	GLN B 502	44.039	56.323	65.007	1.00	49.28	O
ATOM	3326	NE2	GLN B 502	42.164	55.761	66.094	1.00	42.12	N
ATOM	3327	N	ARG B 503	40.630	50.621	64.649	1.00	39.47	N
ATOM	3328	CA	ARG B 503	39.864	49.519	65.188	1.00	36.78	C
ATOM	3329	C	ARG B 503	40.427	48.201	64.642	1.00	34.42	C
ATOM	3330	O	ARG B 503	40.677	47.297	65.427	1.00	34.41	O
ATOM	3331	CB	ARG B 503	38.410	49.557	64.829	1.00	36.81	C
ATOM	3332	CG	ARG B 503	37.638	48.456	65.653	1.00	35.98	C
ATOM	3333	CD	ARG B 503	36.179	48.843	65.506	1.00	35.57	C
ATOM	3334	NE	ARG B 503	35.238	47.915	66.073	1.00	38.92	N
ATOM	3335	CZ	ARG B 503	34.997	47.930	67.391	1.00	42.50	C
ATOM	3336	NH1	ARG B 503	35.680	48.835	68.083	1.00	44.65	N
ATOM	3337	NH2	ARG B 503	34.169	47.071	67.944	1.00	43.19	N
ATOM	3338	N	LEU B 504	40.726	48.172	63.368	1.00	32.25	N

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ATOM	3339	CA	LEU B 504	41.292	46.936	62.823	1.00	33.65	C
ATOM	3340	C	LEU B 504	42.525	46.549	63.601	1.00	36.37	C
ATOM	3341	O	LEU B 504	42.718	45.361	63.937	1.00	38.64	O
ATOM	3342	CB	LEU B 504	41.649	47.125	61.351	1.00	32.77	C
ATOM	3343	CG	LEU B 504	42.329	45.917	60.688	1.00	28.02	C
ATOM	3344	CD1	LEU B 504	41.351	44.779	60.549	1.00	20.13	C
ATOM	3345	CD2	LEU B 504	42.931	46.378	59.373	1.00	23.43	C
ATOM	3346	N	ALA B 505	43.388	47.540	63.857	1.00	37.99	N
ATOM	3347	CA	ALA B 505	44.651	47.278	64.606	1.00	31.73	C
ATOM	3348	C	ALA B 505	44.359	46.883	66.023	1.00	29.70	C
ATOM	3349	O	ALA B 505	44.932	45.965	66.578	1.00	26.36	O
ATOM	3350	CB	ALA B 505	45.503	48.523	64.577	1.00	32.14	C
ATOM	3351	N	GLN B 506	43.415	47.597	66.669	1.00	33.66	N
ATOM	3352	CA	GLN B 506	43.046	47.218	68.038	1.00	35.30	C
ATOM	3353	C	GLN B 506	42.616	45.755	68.063	1.00	36.27	C
ATOM	3354	O	GLN B 506	43.246	45.000	68.820	1.00	39.25	O
ATOM	3355	CB	GLN B 506	41.990	48.086	68.669	1.00	35.30	C
ATOM	3356	CG	GLN B 506	42.394	49.533	68.813	1.00	39.85	C
ATOM	3357	CD	GLN B 506	41.214	50.474	68.812	1.00	45.28	C
ATOM	3358	OE1	GLN B 506	40.128	50.163	69.315	1.00	49.60	O
ATOM	3359	NE2	GLN B 506	41.392	51.660	68.253	1.00	49.18	N
ATOM	3360	N	LEU B 507	41.690	45.322	67.198	1.00	32.30	N
ATOM	3361	CA	LEU B 507	41.346	43.911	67.223	1.00	30.88	C
ATOM	3362	C	LEU B 507	42.491	42.993	66.935	1.00	29.84	C
ATOM	3363	O	LEU B 507	42.616	41.987	67.596	1.00	31.13	O
ATOM	3364	CB	LEU B 507	40.259	43.609	66.138	1.00	32.27	C
ATOM	3365	CG	LEU B 507	39.091	44.575	66.311	1.00	33.70	C
ATOM	3366	CD1	LEU B 507	38.048	44.471	65.247	1.00	34.24	C
ATOM	3367	CD2	LEU B 507	38.559	44.294	67.697	1.00	35.31	C
ATOM	3368	N	LEU B 508	43.350	43.211	65.930	1.00	31.10	N
ATOM	3369	CA	LEU B 508	44.400	42.227	65.712	1.00	30.54	C
ATOM	3370	C	LEU B 508	45.435	42.214	66.800	1.00	30.57	C
ATOM	3371	O	LEU B 508	45.928	41.097	66.978	1.00	33.14	O
ATOM	3372	CB	LEU B 508	45.035	42.228	64.339	1.00	29.19	C
ATOM	3373	CG	LEU B 508	43.984	42.309	63.217	1.00	30.62	C
ATOM	3374	CD1	LEU B 508	44.677	42.905	62.014	1.00	31.84	C
ATOM	3375	CD2	LEU B 508	43.354	40.958	63.003	1.00	26.58	C
ATOM	3376	N	LEU B 509	45.638	43.235	67.613	1.00	28.82	N
ATOM	3377	CA	LEU B 509	46.620	43.082	68.682	1.00	27.22	C
ATOM	3378	C	LEU B 509	46.035	42.165	69.719	1.00	30.73	C
ATOM	3379	O	LEU B 509	46.837	41.469	70.369	1.00	32.94	O
ATOM	3380	CB	LEU B 509	47.031	44.405	69.286	1.00	29.04	C
ATOM	3381	CG	LEU B 509	47.727	45.304	68.242	1.00	28.79	C
ATOM	3382	CD1	LEU B 509	48.237	46.507	68.932	1.00	35.11	C
ATOM	3383	CD2	LEU B 509	48.860	44.511	67.641	1.00	28.05	C
ATOM	3384	N	ILE B 510	44.709	42.129	69.838	1.00	30.11	N
ATOM	3385	CA	ILE B 510	44.065	41.203	70.781	1.00	30.61	C
ATOM	3386	C	ILE B 510	44.378	39.793	70.326	1.00	30.81	C
ATOM	3387	O	ILE B 510	44.466	38.844	71.147	1.00	32.18	O

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ATOM 3388 CB ILE B 510	42.576 41.539 70.920 1.00 35.88	C
ATOM 3389 CG1 ILE B 510	42.321 42.740 71.838 1.00 39.34	C
ATOM 3390 CG2 ILE B 510	41.722 40.376 71.437 1.00 34.95	C
ATOM 3391 CD1 ILE B 510	40.870 43.207 71.863 1.00 39.83	C
ATOM 3392 N LEU B 511	44.572 39.542 69.011 1.00 27.98	N
ATOM 3393 CA LEU B 511	45.034 38.192 68.643 1.00 28.74	C
ATOM 3394 C LEU B 511	46.368 37.876 69.273 1.00 30.01	C
ATOM 3395 O LEU B 511	46.433 36.716 69.732 1.00 35.16	O
ATOM 3396 CB LEU B 511	45.001 37.896 67.156 1.00 26.69	C
ATOM 3397 CG LEU B 511	43.616 38.137 66.479 1.00 26.06	C
ATOM 3398 CD1 LEU B 511	43.726 37.691 65.044 1.00 16.51	C
ATOM 3399 CD2 LEU B 511	42.457 37.560 67.269 1.00 18.67	C
ATOM 3400 N SER B 512	47.371 38.676 69.552 1.00 29.76	N
ATOM 3401 CA SER B 512	48.520 38.200 70.312 1.00 31.98	C
ATOM 3402 C SER B 512	48.256 37.766 71.742 1.00 30.82	C
ATOM 3403 O SER B 512	48.933 36.829 72.224 1.00 30.49	O
ATOM 3404 CB SER B 512	49.652 39.244 70.422 1.00 35.44	C
ATOM 3405 OG SER B 512	49.319 40.233 69.447 1.00 46.47	O
ATOM 3406 N HIS B 513	47.368 38.459 72.427 1.00 30.42	N
ATOM 3407 CA HIS B 513	47.015 38.093 73.790 1.00 32.67	C
ATOM 3408 C HIS B 513	46.328 36.726 73.820 1.00 34.05	C
ATOM 3409 O HIS B 513	46.643 35.820 74.605 1.00 32.52	O
ATOM 3410 CB HIS B 513	46.062 39.120 74.347 1.00 34.61	C
ATOM 3411 CG HIS B 513	46.660 40.486 74.389 1.00 37.60	C
ATOM 3412 ND1 HIS B 513	47.777 40.752 75.169 1.00 41.78	N
ATOM 3413 CD2 HIS B 513	46.307 41.641 73.838 1.00 42.38	C
ATOM 3414 CE1 HIS B 513	48.086 42.014 75.057 1.00 44.76	C
ATOM 3415 NE2 HIS B 513	47.216 42.599 74.230 1.00 47.20	N
ATOM 3416 N ILE B 514	45.397 36.604 72.843 1.00 34.02	N
ATOM 3417 CA ILE B 514	44.770 35.276 72.708 1.00 33.15	C
ATOM 3418 C ILE B 514	45.820 34.235 72.495 1.00 32.37	C
ATOM 3419 O ILE B 514	45.878 33.229 73.224 1.00 34.97	O
ATOM 3420 CB ILE B 514	43.635 35.391 71.710 1.00 32.90	C
ATOM 3421 CG1 ILE B 514	42.445 36.115 72.387 1.00 29.27	C
ATOM 3422 CG2 ILE B 514	43.169 34.033 71.236 1.00 34.89	C
ATOM 3423 CD1 ILE B 514	41.575 36.805 71.391 1.00 32.54	C
ATOM 3424 N ARG B 515	46.768 34.357 71.566 1.00 32.82	N
ATOM 3425 CA ARG B 515	47.815 33.347 71.392 1.00 30.13	C
ATOM 3426 C ARG B 515	48.528 33.144 72.713 1.00 30.92	C
ATOM 3427 O ARG B 515	48.779 32.095 73.242 1.00 32.38	O
ATOM 3428 CB ARG B 515	48.787 33.853 70.351 1.00 32.12	C
ATOM 3429 CG ARG B 515	50.056 33.038 70.203 1.00 32.29	C
ATOM 3430 CD ARG B 515	49.706 31.820 69.408 1.00 35.87	C
ATOM 3431 NE ARG B 515	50.513 31.578 68.211 1.00 39.98	N
ATOM 3432 CZ ARG B 515	50.021 31.993 67.036 1.00 43.57	C
ATOM 3433 NH1 ARG B 515	48.843 32.615 67.019 1.00 46.47	N
ATOM 3434 NH2 ARG B 515	50.705 31.773 65.950 1.00 42.56	N
ATOM 3435 N HIS B 516	48.861 34.252 73.371 1.00 33.83	N
ATOM 3436 CA HIS B 516	49.522 34.215 74.650 1.00 31.88	C

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ATOM 3437 C HIS B 516	48.727 33.345 75.581 1.00 31.82	C
ATOM 3438 O HIS B 516	49.258 32.370 76.082 1.00 35.15	O
ATOM 3439 CB HIS B 516	49.768 35.645 75.138 1.00 33.80	C
ATOM 3440 CG HIS B 516	50.718 35.637 76.327 1.00 39.24	C
ATOM 3441 ND1 HIS B 516	52.021 35.172 76.282 1.00 37.28	N
ATOM 3442 CD2 HIS B 516	50.503 36.045 77.616 1.00 37.42	C
ATOM 3443 CE1 HIS B 516	52.531 35.272 77.481 1.00 35.00	C
ATOM 3444 NE2 HIS B 516	51.655 35.796 78.288 1.00 35.03	N
ATOM 3445 N MET B 517	47.455 33.591 75.850 1.00 31.17	N
ATOM 3446 CA MET B 517	46.668 32.737 76.744 1.00 28.29	C
ATOM 3447 C MET B 517	46.685 31.324 76.296 1.00 30.07	C
ATOM 3448 O MET B 517	46.927 30.420 77.095 1.00 30.86	O
ATOM 3449 CB MET B 517	45.242 33.276 76.730 1.00 32.23	C
ATOM 3450 CG MET B 517	45.217 34.646 77.408 1.00 31.26	C
ATOM 3451 SD MET B 517	43.573 35.270 77.608 1.00 37.21	S
ATOM 3452 CE MET B 517	43.181 35.765 75.937 1.00 28.84	C
ATOM 3453 N SER B 518	46.527 31.089 74.977 1.00 30.90	N
ATOM 3454 CA SER B 518	46.600 29.676 74.543 1.00 31.77	C
ATOM 3455 C SER B 518	47.939 29.094 74.903 1.00 31.54	C
ATOM 3456 O SER B 518	48.073 28.045 75.505 1.00 33.26	O
ATOM 3457 CB SER B 518	46.369 29.547 73.033 1.00 32.22	C
ATOM 3458 OG SER B 518	46.480 28.189 72.666 1.00 29.39	O
ATOM 3459 N ASN B 519	49.028 29.748 74.511 1.00 32.87	N
ATOM 3460 CA ASN B 519	50.339 29.190 74.896 1.00 35.57	C
ATOM 3461 C ASN B 519	50.367 28.942 76.372 1.00 39.13	C
ATOM 3462 O ASN B 519	50.678 27.857 76.863 1.00 41.01	O
ATOM 3463 CB ASN B 519	51.430 30.134 74.396 1.00 33.23	C
ATOM 3464 CG ASN B 519	51.575 29.969 72.886 1.00 35.23	C
ATOM 3465 OD1 ASN B 519	51.665 30.870 72.076 1.00 38.85	O
ATOM 3466 ND2 ASN B 519	51.590 28.729 72.404 1.00 37.47	N
ATOM 3467 N LYS B 520	49.985 29.912 77.222 1.00 41.55	N
ATOM 3468 CA LYS B 520	50.060 29.627 78.653 1.00 44.34	C
ATOM 3469 C LYS B 520	49.141 28.477 79.024 1.00 46.36	C
ATOM 3470 O LYS B 520	49.528 27.609 79.802 1.00 47.82	O
ATOM 3471 CB LYS B 520	49.763 30.907 79.435 1.00 47.11	C
ATOM 3472 CG LYS B 520	50.795 31.979 79.139 1.00 55.94	C
ATOM 3473 CD LYS B 520	52.251 31.565 79.419 1.00 59.42	C
ATOM 3474 CE LYS B 520	52.759 32.291 80.663 1.00 64.54	C
ATOM 3475 NZ LYS B 520	53.052 31.377 81.814 1.00 65.32	N
ATOM 3476 N GLY B 521	47.908 28.460 78.487 1.00 41.64	N
ATOM 3477 CA GLY B 521	46.982 27.422 78.792 1.00 38.71	C
ATOM 3478 C GLY B 521	47.455 26.053 78.433 1.00 38.07	C
ATOM 3479 O GLY B 521	47.258 25.105 79.160 1.00 38.25	O
ATOM 3480 N MET B 522	48.115 25.848 77.306 1.00 42.81	N
ATOM 3481 CA MET B 522	48.619 24.507 76.999 1.00 45.50	C
ATOM 3482 C MET B 522	49.656 24.090 78.013 1.00 50.52	C
ATOM 3483 O MET B 522	49.557 22.956 78.456 1.00 56.62	O
ATOM 3484 CB MET B 522	49.239 24.413 75.630 1.00 40.58	C
ATOM 3485 CG MET B 522	48.145 24.744 74.627 1.00 43.42	C

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ATOM	3486	SD	MET B 522	48.718	24.184	73.023	1.00	48.78	S
ATOM	3487	CE	MET B 522	47.330	24.747	72.036	1.00	46.57	C
ATOM	3488	N	GLU B 523	50.529	24.985	78.435	1.00	56.27	N
ATOM	3489	CA	GLU B 523	51.544	24.685	79.459	1.00	59.59	C
ATOM	3490	C	GLU B 523	50.800	24.081	80.664	1.00	61.35	C
ATOM	3491	O	GLU B 523	51.112	23.012	81.125	1.00	62.06	O
ATOM	3492	CB	GLU B 523	52.236	25.939	79.934	1.00	60.48	C
ATOM	3493	CG	GLU B 523	53.692	26.141	80.004	1.00	62.32	C
ATOM	3494	CD	GLU B 523	54.189	27.545	79.761	1.00	65.44	C
ATOM	3495	OE1	GLU B 523	54.319	28.008	78.588	1.00	68.32	O
ATOM	3496	OE2	GLU B 523	54.460	28.254	80.746	1.00	66.60	O
ATOM	3497	N	HIS B 524	49.819	24.808	81.137	1.00	65.14	N
ATOM	3498	CA	HIS B 524	48.998	24.437	82.275	1.00	69.75	C
ATOM	3499	C	HIS B 524	48.255	23.145	82.016	1.00	69.68	C
ATOM	3500	O	HIS B 524	48.273	22.235	82.845	1.00	67.93	O
ATOM	3501	CB	HIS B 524	48.048	25.598	82.574	1.00	73.34	C
ATOM	3502	CG	HIS B 524	47.051	25.312	83.628	1.00	77.40	C
ATOM	3503	ND1	HIS B 524	45.809	25.918	83.647	1.00	79.82	N
ATOM	3504	CD2	HIS B 524	47.105	24.488	84.700	1.00	79.32	C
ATOM	3505	CE1	HIS B 524	45.125	25.493	84.701	1.00	80.73	C
ATOM	3506	NE2	HIS B 524	45.894	24.624	85.344	1.00	82.59	N
ATOM	3507	N	LEU B 525	47.715	22.983	80.812	1.00	70.58	N
ATOM	3508	CA	LEU B 525	47.028	21.725	80.538	1.00	74.84	C
ATOM	3509	C	LEU B 525	48.035	20.582	80.642	1.00	79.93	C
ATOM	3510	O	LEU B 525	47.759	19.633	81.377	1.00	81.47	O
ATOM	3511	CB	LEU B 525	46.341	21.724	79.198	1.00	73.42	C
ATOM	3512	CG	LEU B 525	44.836	21.743	79.060	1.00	71.12	C
ATOM	3513	CD1	LEU B 525	44.148	22.671	80.045	1.00	70.99	C
ATOM	3514	CD2	LEU B 525	44.459	22.156	77.636	1.00	71.27	C
ATOM	3515	N	TYR B 526	49.165	20.643	79.958	1.00	84.77	N
ATOM	3516	CA	TYR B 526	50.153	19.579	80.005	1.00	91.06	C
ATOM	3517	C	TYR B 526	50.835	19.399	81.335	1.00	92.45	C
ATOM	3518	O	TYR B 526	51.138	18.252	81.737	1.00	92.79	O
ATOM	3519	CB	TYR B 526	51.147	19.722	78.849	1.00	95.73	C
ATOM	3520	CG	ATYR B 526	50.422	19.566	77.521	0.50	97.65	C
ATOM	3521	CG	BTYR B 526	52.174	18.632	78.708	0.50	98.64	C
ATOM	3522	CD1	ATYR B 526	50.194	18.307	76.984	0.50	98.77	C
ATOM	3523	CD1	BTYR B 526	52.083	17.432	79.396	0.50	100.15	C
ATOM	3524	CD2	ATYR B 526	49.922	20.658	76.836	0.50	98.64	C
ATOM	3525	CD2	BTYR B 526	53.272	18.779	77.859	0.50	99.84	C
ATOM	3526	CE1	ATYR B 526	49.514	18.159	75.788	0.50	99.35	C
ATOM	3527	CE1	BTYR B 526	53.002	16.422	79.294	0.50	101.42	C
ATOM	3528	CE2	ATYR B 526	49.239	20.528	75.647	0.50	99.04	C
ATOM	3529	CE2	BTYR B 526	54.213	17.772	77.733	0.50	101.17	C
ATOM	3530	CZ	ATYR B 526	49.040	19.268	75.129	0.50	99.38	C
ATOM	3531	CZ	BTYR B 526	54.075	16.603	78.446	0.50	101.98	C
ATOM	3532	OH	ATYR B 526	48.354	19.121	73.949	0.50	100.58	O
ATOM	3533	OH	BTYR B 526	55.016	15.607	78.310	0.50	103.74	O
ATOM	3534	N	SER B 527	50.986	20.432	82.151	1.00	93.82	N

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ATOM	3535	CA	SER B 527	51.517	20.212	83.504	1.00	96.43	C
ATOM	3536	C	SER B 527	50.635	19.206	84.243	1.00	99.93	C
ATOM	3537	O	SER B 527	51.122	18.212	84.783	1.00	99.91	O
ATOM	3538	CB	SER B 527	51.654	21.528	84.228	1.00	95.12	C
ATOM	3539	OG	SER B 527	50.575	21.842	85.055	1.00	93.84	O
ATOM	3540	N	MET B 528	49.324	19.442	84.235	1.00	104.05	N
ATOM	3541	CA	MET B 528	48.348	18.580	84.874	1.00	106.28	C
ATOM	3542	C	MET B 528	48.514	17.114	84.501	1.00	109.30	C
ATOM	3543	O	MET B 528	49.146	16.375	85.280	1.00	110.26	O
ATOM	3544	CB	MET B 528	46.934	19.066	84.578	1.00	104.92	C
ATOM	3545	CG	MET B 528	46.616	20.428	85.186	1.00	103.89	C
ATOM	3546	SD	MET B 528	45.067	21.090	84.521	1.00	102.69	S
ATOM	3547	CE	MET B 528	43.976	19.685	84.768	1.00	103.03	C
ATOM	3548	N	LYS B 529	47.979	16.659	83.392	1.00	112.58	N
ATOM	3549	CA	LYS B 529	47.968	15.274	82.952	1.00	114.66	C
ATOM	3550	C	LYS B 529	46.519	14.757	82.954	1.00	115.44	C
ATOM	3551	O	LYS B 529	46.210	13.626	83.307	1.00	115.58	O
ATOM	3552	CB	LYS B 529	48.833	14.322	83.758	1.00	115.06	C
ATOM	3553	N	LEU B 536	47.047	14.467	69.426	1.00	90.47	N
ATOM	3554	CA	LEU B 536	45.800	15.110	68.992	1.00	91.19	C
ATOM	3555	C	LEU B 536	45.806	15.246	67.479	1.00	90.41	C
ATOM	3556	O	LEU B 536	44.762	15.397	66.845	1.00	91.34	O
ATOM	3557	CB	LEU B 536	45.635	16.485	69.635	1.00	90.56	C
ATOM	3558	CG	LEU B 536	44.545	17.411	69.144	1.00	89.27	C
ATOM	3559	CD1	LEU B 536	43.162	16.805	69.074	1.00	89.56	C
ATOM	3560	CD2	LEU B 536	44.632	18.761	69.813	1.00	88.59	C
ATOM	3561	N	TYR B 537	47.016	15.149	66.935	1.00	91.03	N
ATOM	3562	CA	TYR B 537	47.194	15.255	65.492	1.00	91.03	C
ATOM	3563	C	TYR B 537	46.231	14.307	64.787	1.00	90.74	C
ATOM	3564	O	TYR B 537	45.467	14.712	63.911	1.00	89.89	O
ATOM	3565	CB	TYR B 537	48.651	14.949	65.101	1.00	90.58	C
ATOM	3566	CG	TYR B 537	48.832	15.074	63.601	1.00	91.36	C
ATOM	3567	CD1	TYR B 537	48.486	14.030	62.760	1.00	91.31	C
ATOM	3568	CD2	TYR B 537	49.323	16.251	63.041	1.00	92.16	C
ATOM	3569	CE1	TYR B 537	48.636	14.149	61.396	1.00	93.25	C
ATOM	3570	CE2	TYR B 537	49.481	16.379	61.672	1.00	92.69	C
ATOM	3571	CZ	TYR B 537	49.134	15.324	60.855	1.00	93.50	C
ATOM	3572	OH	TYR B 537	49.265	15.403	59.485	1.00	93.62	O
ATOM	3573	N	ASP B 538	46.306	13.033	65.173	1.00	91.50	N
ATOM	3574	CA	ASP B 538	45.486	11.989	64.559	1.00	92.46	C
ATOM	3575	C	ASP B 538	44.045	12.098	65.027	1.00	89.47	C
ATOM	3576	O	ASP B 538	43.116	11.887	64.239	1.00	89.78	O
ATOM	3577	CB	ASP B 538	46.059	10.611	64.812	1.00	96.58	C
ATOM	3578	CG	ASP B 538	47.466	10.656	65.393	1.00	98.56	C
ATOM	3579	OD1	ASP B 538	48.385	11.085	64.658	1.00	98.61	O
ATOM	3580	OD2	ASP B 538	47.567	10.262	66.578	1.00	100.00	O
ATOM	3581	N	LEU B 539	43.860	12.515	66.285	1.00	85.65	N
ATOM	3582	CA	LEU B 539	42.515	12.744	66.774	1.00	82.51	C
ATOM	3583	C	LEU B 539	41.753	13.616	65.771	1.00	79.45	C

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ATOM	3584	O	LEU B 539	40.688	13.197	65.351	1.00	77.96	O
ATOM	3585	CB	LEU B 539	42.444	13.387	68.160	1.00	83.22	C
ATOM	3586	CG	LEU B 539	40.995	13.548	68.674	1.00	84.94	C
ATOM	3587	CD1	LEU B 539	40.178	12.277	68.459	1.00	84.31	C
ATOM	3588	CD2	LEU B 539	40.886	13.991	70.123	1.00	84.23	C
ATOM	3589	N	LEU B 540	42.333	14.748	65.377	1.00	76.53	N
ATOM	3590	CA	LEU B 540	41.691	15.629	64.394	1.00	74.04	C
ATOM	3591	C	LEU B 540	41.634	15.010	63.008	1.00	72.97	C
ATOM	3592	O	LEU B 540	40.703	15.130	62.207	1.00	67.85	O
ATOM	3593	CB	LEU B 540	42.448	16.976	64.343	1.00	69.75	C
ATOM	3594	CG	LEU B 540	42.627	17.636	65.710	1.00	67.68	C
ATOM	3595	CD1	LEU B 540	43.630	18.774	65.641	1.00	67.75	C
ATOM	3596	CD2	LEU B 540	41.288	18.127	66.240	1.00	66.55	C
ATOM	3597	N	LEU B 541	42.734	14.308	62.684	1.00	74.85	N
ATOM	3598	CA	LEU B 541	42.817	13.660	61.369	1.00	75.55	C
ATOM	3599	C	LEU B 541	41.604	12.757	61.179	1.00	74.33	C
ATOM	3600	O	LEU B 541	40.915	12.818	60.174	1.00	73.71	O
ATOM	3601	CB	LEU B 541	44.101	12.859	61.270	1.00	76.52	C
ATOM	3602	CG	LEU B 541	44.429	12.193	59.942	1.00	77.83	C
ATOM	3603	CD1	LEU B 541	43.682	12.832	58.761	1.00	77.63	C
ATOM	3604	CD2	LEU B 541	45.937	12.242	59.708	1.00	76.18	C
ATOM	3605	N	GLU B 542	41.323	11.945	62.184	1.00	74.70	N
ATOM	3606	CA	GLU B 542	40.161	11.055	62.111	1.00	78.10	C
ATOM	3607	C	GLU B 542	38.871	11.830	62.028	1.00	76.88	C
ATOM	3608	O	GLU B 542	38.025	11.609	61.165	1.00	76.15	O
ATOM	3609	CB	GLU B 542	40.206	10.099	63.314	1.00	81.69	C
ATOM	3610	CG	GLU B 542	41.236	8.981	63.062	1.00	86.31	C
ATOM	3611	CD	GLU B 542	40.967	8.283	61.729	1.00	90.86	C
ATOM	3612	OE1	GLU B 542	39.878	7.669	61.534	1.00	92.07	O
ATOM	3613	OE2	GLU B 542	41.868	8.367	60.853	1.00	92.44	O
ATOM	3614	N	MET B 543	38.753	12.820	62.890	1.00	76.90	N
ATOM	3615	CA	MET B 543	37.654	13.758	62.973	1.00	77.35	C
ATOM	3616	C	MET B 543	37.421	14.492	61.665	1.00	76.40	C
ATOM	3617	O	MET B 543	36.317	14.683	61.196	1.00	73.90	O
ATOM	3618	CB	MET B 543	38.008	14.769	64.083	1.00	79.63	C
ATOM	3619	CG	MET B 543	38.041	14.163	65.465	1.00	80.33	C
ATOM	3620	SD	MET B 543	37.001	15.039	66.655	1.00	83.37	S
ATOM	3621	CE	MET B 543	38.090	14.960	68.082	1.00	80.57	C
ATOM	3622	N	LEU B 544	38.514	14.931	61.037	1.00	78.72	N
ATOM	3623	CA	LEU B 544	38.450	15.633	59.761	1.00	80.40	C
ATOM	3624	C	LEU B 544	38.116	14.649	58.643	1.00	86.77	C
ATOM	3625	O	LEU B 544	37.409	14.973	57.688	1.00	85.08	O
ATOM	3626	CB	LEU B 544	39.762	16.355	59.539	1.00	75.21	C
ATOM	3627	CG	LEU B 544	39.822	17.785	60.068	1.00	72.72	C
ATOM	3628	CD1	LEU B 544	41.249	18.270	60.143	1.00	70.71	C
ATOM	3629	CD2	LEU B 544	38.970	18.702	59.200	1.00	72.37	C
ATOM	3630	N	ASP B 545	38.582	13.412	58.826	1.00	94.59	N
ATOM	3631	CA	ASP B 545	38.296	12.264	57.997	1.00	101.77	C
ATOM	3632	C	ASP B 545	36.804	11.881	58.061	1.00	103.94	C

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ATOM 3633	O	ASP B 545	36.101 11.897 57.058 1.00103.96	O
ATOM 3634	CB	ASP B 545	39.074 11.042 58.483 1.00104.99	C
ATOM 3635	CG	ASP B 545	40.217 10.526 57.666 1.00107.94	C
ATOM 3636	OD1	ASP B 545	40.367 10.845 56.456 1.00109.53	O
ATOM 3637	OD2	ASP B 545	41.032 9.741 58.242 1.00107.92	O
ATOM 3638	N	ALA B 546	36.369 11.557 59.271 1.00106.70	N
ATOM 3639	CA	ALA B 546	35.015 11.150 59.581 1.00110.47	C
ATOM 3640	C	ALA B 546	33.945 12.129 59.146 1.00112.92	C
ATOM 3641	O	ALA B 546	32.865 11.719 58.724 1.00113.22	O
ATOM 3642	CB	ALA B 546	34.881 10.866 61.078 1.00110.18	C
ATOM 3643	N	HIS B 547	34.213 13.420 59.155 1.00116.65	N
ATOM 3644	CA	HIS B 547	33.322 14.479 58.740 1.00119.67	C
ATOM 3645	C	HIS B 547	32.766 14.292 57.336 1.00123.33	C
ATOM 3646	O	HIS B 547	31.663 14.755 57.030 1.00123.70	O
ATOM 3647	CB	HIS B 547	34.086 15.813 58.802 1.00118.14	C
ATOM 3648	CG	HIS B 547	33.193 17.007 58.672 1.00116.79	C
ATOM 3649	ND1	HIS B 547	33.295 17.920 57.648 1.00115.21	N
ATOM 3650	CD2	HIS B 547	32.171 17.422 59.467 1.00116.21	C
ATOM 3651	CE1	HIS B 547	32.379 18.843 57.812 1.00115.15	C
ATOM 3652	NE2	HIS B 547	31.683 18.573 58.905 1.00115.69	N
ATOM 3653	N	ARG B 548	33.522 13.626 56.471 1.00127.96	N
ATOM 3654	CA	ARG B 548	33.142 13.329 55.105 1.00132.03	C
ATOM 3655	C	ARG B 548	32.277 12.070 55.013 1.00134.33	C
ATOM 3656	O	ARG B 548	31.802 11.729 53.929 1.00134.94	O
ATOM 3657	CB	ARG B 548	34.396 13.180 54.235 1.00131.91	C
ATOM 3664	N	LEU B 549	32.074 11.401 56.138 1.00136.47	N
ATOM 3665	CA	LEU B 549	31.213 10.236 56.250 1.00138.06	C
ATOM 3666	C	LEU B 549	30.140 10.461 57.323 1.00138.50	C
ATOM 3667	O	LEU B 549	29.531 9.529 57.840 1.00139.19	O
ATOM 3668	CB	LEU B 549	32.012 8.971 56.538 1.00138.52	C
ATOM 3672	N	HIS B 550	29.921 11.734 57.655 1.00138.06	N
ATOM 3673	CA	HIS B 550	28.939 12.136 58.640 1.00137.04	C
ATOM 3674	C	HIS B 550	27.656 12.584 57.943 1.00138.03	C
ATOM 3675	O	HIS B 550	27.711 13.069 56.810 1.00139.03	O
ATOM 3676	CB	HIS B 550	29.418 13.280 59.535 1.00134.98	C
ATOM 3677	CG	HIS B 550	30.155 12.792 60.742 1.00133.02	C
ATOM 3678	ND1	HIS B 550	30.606 13.616 61.734 1.00131.99	N
ATOM 3679	CD2	HIS B 550	30.522 11.529 61.086 1.00132.55	C
ATOM 3680	CE1	HIS B 550	31.219 12.880 62.652 1.00132.14	C
ATOM 3681	NE2	HIS B 550	31.180 11.617 62.283 1.00132.12	N
ATOM 3682	N	ALA B 551	26.545 12.411 58.645 1.00138.08	N
ATOM 3683	CA	ALA B 551	25.256 12.796 58.080 1.00138.49	C
ATOM 3684	C	ALA B 551	24.858 14.189 58.542 1.00138.87	C
ATOM 3685	O	ALA B 551	25.318 15.156 57.901 1.00139.61	O
ATOM 3686	CB	ALA B 551	24.215 11.761 58.460 1.00139.09	C
TER 3687	ALA	B 551		
HETATM 3688	C1	CBM B 381	50.363 23.182 66.508 1.00 70.74	C
HETATM 3689	C2	CBM B 381	50.898 24.501 67.006 1.00 63.90	C
HETATM 3690	O1	CBM B 381	50.120 23.220 65.205 1.00 71.38	O

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HETATM 3691	O2	CBM B 381	50.159	22.259	67.288	1.00	73.88	O
HETATM 3692	C1	RAL B 600	37.136	24.786	77.943	1.00	41.59	C
HETATM 3693	C2	RAL B 600	36.077	25.070	77.112	1.00	39.83	C
HETATM 3694	C3	RAL B 600	35.957	26.328	76.578	1.00	38.16	C
HETATM 3695	O3	RAL B 600	34.871	26.528	75.754	1.00	40.43	O
HETATM 3696	C4	RAL B 600	36.882	27.310	76.907	1.00	39.29	C
HETATM 3697	C5	RAL B 600	37.925	27.033	77.738	1.00	39.54	C
HETATM 3698	S6	RAL B 600	39.146	28.022	78.355	1.00	40.30	S
HETATM 3699	C7	RAL B 600	39.970	26.805	79.208	1.00	41.19	C
HETATM 3700	C8	RAL B 600	41.199	27.019	80.019	1.00	39.95	C
HETATM 3701	C9	RAL B 600	41.345	28.185	80.728	1.00	41.84	C
HETATM 3702	C10	RAL B 600	42.438	28.411	81.548	1.00	44.69	C
HETATM 3703	C11	RAL B 600	43.437	27.448	81.612	1.00	45.99	C
HETATM 3704	O11	RAL B 600	44.521	27.695	82.432	1.00	50.33	O
HETATM 3705	C12	RAL B 600	43.314	26.290	80.885	1.00	42.47	C
HETATM 3706	C13	RAL B 600	42.179	26.085	80.108	1.00	39.90	C
HETATM 3707	C14	RAL B 600	38.054	25.738	78.252	1.00	38.16	C
HETATM 3708	C15	RAL B 600	39.227	25.613	79.090	1.00	38.60	C
HETATM 3709	C16	RAL B 600	39.540	24.434	79.718	1.00	37.47	C
HETATM 3710	O16	RAL B 600	39.634	24.372	80.932	1.00	36.58	O
HETATM 3711	C17	RAL B 600	39.914	23.230	78.994	1.00	34.13	C
HETATM 3712	C18	RAL B 600	39.972	22.094	79.765	1.00	34.98	C
HETATM 3713	C19	RAL B 600	40.396	20.876	79.214	1.00	34.59	C
HETATM 3714	C20	RAL B 600	40.771	20.895	77.901	1.00	38.96	C
HETATM 3715	C21	RAL B 600	40.752	22.057	77.116	1.00	37.83	C
HETATM 3716	C22	RAL B 600	40.305	23.245	77.679	1.00	35.52	C
HETATM 3717	O23	RAL B 600	41.204	19.791	77.200	1.00	44.41	O
HETATM 3718	C24	RAL B 600	40.319	18.706	77.123	1.00	45.36	C
HETATM 3719	C25	RAL B 600	41.196	17.625	76.411	1.00	44.46	C
HETATM 3720	N26	RAL B 600	40.895	17.562	74.984	1.00	43.60	N
HETATM 3721	C27	RAL B 600	41.659	16.562	74.294	1.00	43.45	C
HETATM 3722	C28	RAL B 600	41.488	16.507	72.779	1.00	44.58	C
HETATM 3723	C29	RAL B 600	41.576	17.929	72.216	1.00	46.56	C
HETATM 3724	C30	RAL B 600	40.388	18.722	72.842	1.00	45.78	C
HETATM 3725	C31	RAL B 600	40.748	18.876	74.355	1.00	45.64	C
HETATM 1	O	HOH 1	78.671	45.635	73.728	1.00	18.41	
HETATM 2	O	HOH 2	65.939	43.852	69.249	1.00	23.40	
HETATM 3	O	HOH 3	67.879	41.641	69.144	1.00	32.98	
HETATM 4	O	HOH 4	72.161	43.516	68.328	1.00	32.96	
HETATM 5	O	HOH 5	45.293	41.236	55.063	1.00	36.48	
HETATM 6	O	HOH 6	49.117	45.566	50.606	1.00	44.30	
HETATM 7	O	HOH 7	66.937	34.473	57.692	1.00	38.73	
HETATM 8	O	HOH 8	69.523	44.664	70.139	1.00	37.12	
HETATM 9	O	HOH 9	73.684	41.492	67.111	1.00	46.69	
HETATM 10	O	HOH 10	52.332	42.566	71.041	1.00	39.72	
HETATM 11	O	HOH 11	77.230	47.810	75.360	1.00	41.93	
HETATM 12	O	HOH 12	68.753	44.504	65.387	1.00	47.61	
HETATM 13	O	HOH 13	76.079	37.937	81.002	1.00	48.27	
HETATM 14	O	HOH 14	70.480	45.943	67.468	1.00	53.17	

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HETATM	15	O	HOH	15	56.336	35.571	76.185	1.00	44.22
HETATM	16	O	HOH	16	40.293	54.526	68.285	1.00	65.88
HETATM	17	O	HOH	17	48.191	42.643	49.929	1.00	66.50
HETATM	18	O	HOH	18	42.953	57.811	69.507	1.00	88.95
HETATM	19	O	HOH	19	66.169	45.843	67.240	1.00	30.54
HETATM	20	O	HOH	20	63.477	52.158	67.006	1.00	37.54
HETATM	21	O	HOH	21	79.511	32.798	62.361	1.00	58.45
HETATM	22	O	HOH	22	79.665	44.463	70.700	1.00	50.89
HETATM	23	O	HOH	23	59.043	57.930	76.285	1.00	75.57
HETATM	24	O	HOH	24	60.390	37.277	84.122	1.00	43.42
HETATM	25	O	HOH	25	76.899	29.211	59.311	1.00	72.06
HETATM	26	O	HOH	26	53.280	40.076	69.802	1.00	43.07
HETATM	27	O	HOH	27	45.293	51.300	66.697	1.00	40.03
HETATM	28	O	HOH	28	47.486	57.944	58.839	1.00	56.99
HETATM	29	O	HOH	29	47.155	44.689	45.733	1.00	81.53
HETATM	30	O	HOH	30	48.375	39.816	66.498	1.00	50.55
HETATM	31	O	HOH	31	54.862	44.533	76.824	1.00	38.59
HETATM	32	O	HOH	32	81.320	34.485	67.792	1.00	53.56
HETATM	33	O	HOH	33	78.189	37.052	73.346	1.00	55.28
HETATM	34	O	HOH	34	59.058	38.545	75.613	1.00	27.41
HETATM	35	O	HOH	35	56.115	30.116	78.032	1.00	64.88
HETATM	36	O	HOH	36	48.376	56.369	48.335	1.00	74.84
HETATM	37	O	HOH	37	45.334	56.547	54.616	1.00	51.79
HETATM	38	O	HOH	38	68.751	46.528	72.429	1.00	61.72
HETATM	39	O	HOH	39	68.749	48.138	63.262	1.00	75.75
HETATM	40	O	HOH	40	71.042	50.167	64.313	1.00	57.30
HETATM	41	O	HOH	41	51.867	54.038	84.504	1.00	55.62
HETATM	42	O	HOH	42	46.423	34.649	68.035	1.00	59.90
HETATM	43	O	HOH	43	65.977	46.032	71.358	1.00	39.14
HETATM	44	O	HOH	44	51.878	43.672	50.996	1.00	56.18
HETATM	45	O	HOH	45	80.471	31.343	76.488	1.00	42.36
HETATM	46	O	HOH	46	71.303	44.041	59.439	1.00	70.71
HETATM	47	O	HOH	47	41.452	53.507	71.888	1.00	75.54
HETATM	48	O	HOH	48	82.937	41.654	71.088	1.00	75.67
HETATM	49	O	HOH	49	65.172	34.557	81.617	1.00	57.84
HETATM	50	O	HOH	50	67.048	50.080	60.811	1.00	49.02
HETATM	51	O	HOH	51	55.298	50.332	52.676	1.00	48.09
HETATM	52	O	HOH	52	56.566	48.350	50.527	1.00	62.34
HETATM	53	O	HOH	53	69.733	31.591	80.417	1.00	84.65
HETATM	54	O	HOH	54	54.694	40.240	86.738	1.00	70.28
HETATM	55	O	HOH	55	59.333	24.933	73.595	1.00	57.45
HETATM	56	O	HOH	56	70.409	51.391	81.779	1.00	59.24
HETATM	1	O	HOH	57	31.845	31.472	62.530	1.00	29.20
HETATM	2	O	HOH	58	32.562	30.513	69.296	1.00	34.69
HETATM	3	O	HOH	59	34.498	28.884	70.461	1.00	29.20
HETATM	4	O	HOH	60	45.409	26.911	70.363	1.00	32.57
HETATM	5	O	HOH	61	34.193	27.990	73.282	1.00	30.58
HETATM	6	O	HOH	62	32.822	24.241	68.673	1.00	40.19
HETATM	7	O	HOH	63	33.935	27.969	65.961	1.00	35.49

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HETATM	8	O	HOH	64	30.796	19.159	80.905	1.00	50.10
HETATM	9	O	HOH	65	29.988	26.357	73.687	1.00	40.36
HETATM	10	O	HOH	66	46.316	34.186	65.148	1.00	39.13
HETATM	11	O	HOH	67	30.697	30.965	71.805	1.00	50.24
HETATM	12	O	HOH	68	49.113	27.839	71.457	1.00	47.01
HETATM	13	O	HOH	69	40.944	40.126	48.862	1.00	55.13
HETATM	14	O	HOH	70	32.119	26.221	70.754	1.00	51.01
HETATM	15	O	HOH	71	37.406	41.975	48.996	1.00	47.12
HETATM	16	O	HOH	72	48.657	39.247	50.483	1.00	63.81
HETATM	17	O	HOH	73	26.862	41.181	48.762	1.00	69.42
HETATM	18	O	HOH	74	25.401	30.214	67.857	1.00	72.19
HETATM	19	O	HOH	75	30.576	21.546	58.202	1.00	51.83
HETATM	20	O	HOH	76	35.909	14.132	78.132	1.00	62.99
HETATM	21	O	HOH	77	52.634	29.330	63.071	1.00	58.31
HETATM	22	O	HOH	78	26.808	27.051	57.128	1.00	45.94
HETATM	23	O	HOH	79	29.245	28.608	55.705	1.00	83.48
HETATM	24	O	HOH	80	29.129	27.091	76.317	1.00	33.47
HETATM	25	O	HOH	81	33.625	38.647	81.633	1.00	41.20
HETATM	26	O	HOH	82	36.603	51.147	53.895	1.00	48.15
HETATM	27	O	HOH	83	28.622	46.426	60.451	1.00	52.33
HETATM	28	O	HOH	84	38.056	53.295	65.884	1.00	60.11
HETATM	29	O	HOH	85	43.521	38.970	58.179	1.00	51.73
HETATM	30	O	HOH	86	27.777	37.624	76.264	1.00	70.19
HETATM	31	O	HOH	87	22.739	30.334	60.747	1.00	67.64
HETATM	32	O	HOH	88	26.762	28.420	86.838	1.00	65.95
HETATM	33	O	HOH	89	39.032	29.779	46.494	1.00	89.14
HETATM	34	O	HOH	90	34.718	26.674	68.385	1.00	47.22
HETATM	35	O	HOH	91	29.738	28.093	71.095	1.00	44.84
HETATM	36	O	HOH	92	55.506	30.331	64.286	1.00	70.99
HETATM	37	O	HOH	93	29.692	12.806	76.719	1.00	53.32
HETATM	38	O	HOH	94	29.342	24.024	63.816	1.00	67.83
HETATM	39	O	HOH	95	29.596	43.489	50.236	1.00	55.40
HETATM	40	O	HOH	96	33.505	15.266	63.104	1.00	76.39
HETATM	41	O	HOH	97	36.057	14.492	70.938	1.00	71.41
HETATM	42	O	HOH	98	26.881	34.813	73.143	1.00	72.62
HETATM	43	O	HOH	99	27.506	35.250	67.027	1.00	53.58
HETATM	44	O	HOH	100	25.166	33.321	65.780	1.00	85.60

END

SUBSTITUTE SHEET (RULE 26)

## FIGURE 21

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HEADER NUCLEAR RECEPTOR 08-SEP-97 1ERE  
TITLE HUMAN OESTROGEN RECEPTOR LIGAND-BINDING DOMAIN IN  
COMPLEX  
TITLE 2 WITH 17BETA-OESTRADIOL  
COMPND MOL\_ID: 1;  
COMPND 2 MOLECULE: OESTROGEN RECEPTOR;  
COMPND 3 CHAIN: A, B, C, D, E, F;  
COMPND 4 FRAGMENT: LIGAND-BINDING DOMAIN;  
COMPND 5 SYNONYM: ESTROGEN RECEPTOR, ER-LBD;  
COMPND 6 BIOLOGICAL\_UNIT: DIMER;  
COMPND 7 OTHER\_DETAILS: LIGAND-BINDING DOMAIN  
COMPND 8 (DOMAIN E - RESIDUES 301-553) IN COMPLEX WITH ENDOGENOUS  
  
COMPND 9 LIGAND 17BETA-OESTRADIOL  
SOURCE MOL\_ID: 1;  
SOURCE 2 ORGANISM\_SCIENTIFIC: HOMO SAPIENS;  
SOURCE 3 ORGANISM\_COMMON: HUMAN;  
SOURCE 4 STRAIN: JM109;  
SOURCE 5 VARIANT: C1857;  
SOURCE 6 PLASMID: PEALPHA 35;  
SOURCE 7 GENE: ER ALPHA  
KEYWDS , NUCLEAR RECEPTOR, TRANSCRIPTION FACTOR, STEROID, AGONIST  
  
AUTHOR A.M.BRZOZOWSKI,A.C.W.PIKE  
REMARK 1  
REMARK 2  
REMARK 2 RESOLUTION. 3.1 ANGSTROMS.  
REMARK 3  
REMARK 3 REFINEMENT.  
REMARK 3 PROGRAM : REFMAC  
REMARK 3 AUTHORS : MURSHUDOV,VAGIN,DODSON  
REMARK 3  
REMARK 3 DATA USED IN REFINEMENT.  
REMARK 3 RESOLUTION RANGE HIGH (ANGSTROMS) : 3.1  
REMARK 3 RESOLUTION RANGE LOW (ANGSTROMS) : 20  
REMARK 3 DATA CUTOFF (SIGMA(F)) : 0  
REMARK 3 COMPLETENESS FOR RANGE (%) : 99.1  
REMARK 3 NUMBER OF REFLECTIONS : 33981  
REMARK 3  
REMARK 3 FIT TO DATA USED IN REFINEMENT.  
REMARK 3 CROSS-VALIDATION METHOD : THROUGHOUT  
REMARK 3 FREE R VALUE TEST SET SELECTION : RANDOM  
REMARK 3 R VALUE (WORKING + TEST SET) : NONE  
REMARK 3 R VALUE (WORKING SET) : 0.218  
REMARK 3 FREE R VALUE : 0.251

REMARK 3 FREE R VALUE TEST SET SIZE (%) : 10  
REMARK 3 FREE R VALUE TEST SET COUNT : 3398  
REMARK 3  
REMARK 6 ER-LBD WAS CARBOXYMETHYLATED PRIOR TO CRYSTALLISATION  
BUT  
REMARK 6 MODIFIED CYSTEINES ARE NOT MODELLED IN THIS ENTRY.  
REMARK 7  
REMARK 7 RESIDUES LEU306, LEU466, LEU469, LYS492, LYS531 AND LEU536  
  
REMARK 7 (CHAINS ABCDEF) WERE POORLY RESOLVED IN THE ELECTRON  
  
REMARK 7 DENSITY MAPS AND ARE NOT FULLY MODELLED IN THIS ENTRY.  
  
REMARK 8  
REMARK 8 RESIDUES MODELLED IN ALTERNATE CONFORMATIONS (CHAINS  
  
REMARK 8 ABCDEF): 377,501,513,530  
REMARK 999  
REMARK 999 SEQUENCE  
REMARK 999 REFERENCE: REFERENCE: SER A 301 - ASN A 304 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER TYR A 331 - PRO A 336 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER LEU A 462 - SER A 464 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER LEU A 549 - THR A 553 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER.  
REMARK 999 REFERENCE: REFERENCE: SER B 301 - ASN B 304 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER TYR B 331 - PRO B 336 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER LEU B 462 - SER B 464 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER LEU B 549 - THR B 553 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER.  
REMARK 999 REFERENCE: REFERENCE: SER C 301 - ASN C 304 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER TYR C 331 - PRO C 336 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER LEU C 462 - SER C 464 MISSING FROM  
  
REMARK 999 PDB DUE TO DISORDER LEU C 549 - THR C 553 MISSING FROM

**SUBSTITUTE SHEET (RULE 26)**

REMARK 999 PDB DUE TO DISORDER.

REMARK 999 REFERENCE: REFERENCE: SER D 301 - ASN D 304 MISSING FROM

REMARK 999 PDB DUE TO DISORDER TYR D 331 - PRO D 336 MISSING FROM

REMARK 999 PDB DUE TO DISORDER LEU D 462 - SER D 464 MISSING FROM

REMARK 999 PDB DUE TO DISORDER LEU D 549 - THR D 553 MISSING FROM

REMARK 999 PDB DUE TO DISORDER.

REMARK 999 REFERENCE: REFERENCE: SER E 301 - ASN E 304 MISSING FROM

REMARK 999 PDB DUE TO DISORDER TYR E 331 - PRO E 336 MISSING FROM

REMARK 999 PDB DUE TO DISORDER LEU E 462 - SER E 464 MISSING FROM

REMARK 999 PDB DUE TO DISORDER LEU E 549 - THR E 553 MISSING FROM

REMARK 999 PDB DUE TO DISORDER.

REMARK 999 REFERENCE: REFERENCE: SER F 301 - ASN F 304 MISSING FROM

REMARK 999 PDB DUE TO DISORDER TYR F 331 - PRO F 336 MISSING FROM

REMARK 999 PDB DUE TO DISORDER LEU F 462 - SER F 464 MISSING FROM

REMARK 999 PDB DUE TO DISORDER LEU F 549 - THR F 553 MISSING FROM

REMARK 999 PDB DUE TO DISORDER.

CRYST1 61.480 115.160 137.380 90.00 98.80 90.00 P 1 21 1 12

ORIGX1 1.000000 0.000000 0.000000 0.000000

ORIGX2 0.000000 1.000000 0.000000 0.000000

ORIGX3 0.000000 0.000000 1.000000 0.000000

SCALE1 0.016265 0.000000 0.002518 0.000000

SCALE2 0.000000 0.008684 0.000000 0.000000

SCALE3 0.000000 0.000000 0.007366 0.000000

ATOM 1 N SER A 305 22.376 70.539 109.257 1.00 90.58 N

ATOM 2 CA SER A 305 21.381 69.729 110.019 1.00 89.92 C

ATOM 3 C SER A 305 20.264 70.593 110.587 1.00 89.41 C

ATOM 4 O SER A 305 20.539 71.556 111.320 1.00 89.09 O

ATOM 5 CB SER A 305 22.072 68.944 111.149 1.00 89.79 C

ATOM 6 OG SER A 305 21.136 68.215 111.938 1.00 89.19 O

ATOM 7 N LEU A 306 19.015 70.206 110.299 1.00 88.77 N

ATOM 8 CA LEU A 306 17.865 70.930 110.863 1.00 88.07 C

ATOM 9 C LEU A 306 18.131 71.087 112.365 1.00 86.68 C

ATOM 10 O LEU A 306 18.154 72.187 112.907 1.00 86.51 O

ATOM	11	CB	LEU A 306	16.542	70.192	110.645	1.00	88.32	C
ATOM	15	N	ALA A 307	18.397	69.974	113.039	1.00	84.80	N
ATOM	16	CA	ALA A 307	18.729	69.938	114.436	1.00	83.76	C
ATOM	17	C	ALA A 307	19.481	71.204	114.826	1.00	83.39	C
ATOM	18	O	ALA A 307	18.990	71.996	115.641	1.00	83.52	O
ATOM	19	CB	ALA A 307	19.658	68.756	114.709	1.00	84.44	C
ATOM	20	N	LEU A 308	20.651	71.396	114.216	1.00	82.63	N
ATOM	21	CA	LEU A 308	21.450	72.573	114.519	1.00	82.87	C
ATOM	22	C	LEU A 308	20.880	73.922	114.137	1.00	83.17	C
ATOM	23	O	LEU A 308	21.524	74.938	114.470	1.00	85.07	O
ATOM	24	CB	LEU A 308	22.856	72.405	113.918	1.00	82.50	C
ATOM	25	CG	LEU A 308	23.622	71.169	114.406	1.00	82.65	C
ATOM	26	CD1	LEU A 308	25.115	71.374	114.134	1.00	82.32	C
ATOM	27	CD2	LEU A 308	23.409	70.923	115.910	1.00	82.67	C
ATOM	28	N	SER A 309	19.730	74.056	113.506	1.00	82.11	N
ATOM	29	CA	SER A 309	19.152	75.332	113.145	1.00	81.35	C
ATOM	30	C	SER A 309	17.899	75.697	113.915	1.00	79.81	C
ATOM	31	O	SER A 309	17.635	76.897	114.084	1.00	80.42	O
ATOM	32	CB	SER A 309	18.766	75.242	111.654	1.00	83.07	C
ATOM	33	OG	SER A 309	19.898	74.642	110.994	1.00	85.37	O
ATOM	34	N	LEU A 310	17.120	74.699	114.355	1.00	77.25	N
ATOM	35	CA	LEU A 310	15.904	75.058	115.082	1.00	74.54	C
ATOM	36	C	LEU A 310	16.256	75.861	116.330	1.00	73.69	C
ATOM	37	O	LEU A 310	17.351	75.858	116.884	1.00	73.90	O
ATOM	38	CB	LEU A 310	15.045	73.869	115.438	1.00	74.07	C
ATOM	39	CG	LEU A 310	15.143	72.689	114.475	1.00	74.30	C
ATOM	40	CD1	LEU A 310	15.798	71.520	115.196	1.00	74.63	C
ATOM	41	CD2	LEU A 310	13.775	72.311	113.936	1.00	74.41	C
ATOM	42	N	THR A 311	15.256	76.611	116.750	1.00	72.43	N
ATOM	43	CA	THR A 311	15.398	77.463	117.933	1.00	71.67	C
ATOM	44	C	THR A 311	14.918	76.624	119.094	1.00	70.84	C
ATOM	45	O	THR A 311	14.145	75.689	118.807	1.00	70.32	O
ATOM	46	CB	THR A 311	14.566	78.734	117.727	1.00	72.13	C
ATOM	47	OG1	THR A 311	13.163	78.469	117.614	1.00	71.92	O
ATOM	48	CG2	THR A 311	14.993	79.395	116.418	1.00	72.78	C
ATOM	49	N	ALA A 312	15.271	76.947	120.334	1.00	70.12	N
ATOM	50	CA	ALA A 312	14.791	76.149	121.458	1.00	69.91	C
ATOM	51	C	ALA A 312	13.291	75.914	121.324	1.00	70.10	C
ATOM	52	O	ALA A 312	12.840	74.799	121.594	1.00	70.35	O
ATOM	53	CB	ALA A 312	15.085	76.752	122.801	1.00	69.80	C
ATOM	54	N	ASP A 313	12.549	76.922	120.901	1.00	70.79	N
ATOM	55	CA	ASP A 313	11.123	76.716	120.726	1.00	72.57	C
ATOM	56	C	ASP A 313	10.756	75.706	119.664	1.00	70.70	C
ATOM	57	O	ASP A 313	9.870	74.885	119.911	1.00	69.68	O
ATOM	58	CB	ASP A 313	10.481	78.090	120.476	1.00	76.96	C

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ATOM	59	CG ASP A 313	10.315	78.771	121.840	1.00	80.40	C
ATOM	60	OD1 ASP A 313	9.745	78.100	122.746	1.00	81.90	O
ATOM	61	OD2 ASP A 313	10.765	79.936	121.976	1.00	81.89	O
ATOM	62	N GLN A 314	11.395	75.715	118.511	1.00	69.96	N
ATOM	63	CA GLN A 314	11.075	74.764	117.448	1.00	69.81	C
ATOM	64	C GLN A 314	11.407	73.341	117.876	1.00	68.14	C
ATOM	65	O GLN A 314	10.612	72.419	117.660	1.00	68.14	O
ATOM	66	CB GLN A 314	11.847	75.094	116.174	1.00	71.65	C
ATOM	67	CG GLN A 314	11.940	76.601	116.001	1.00	73.88	C
ATOM	68	CD GLN A 314	12.509	77.009	114.669	1.00	76.03	C
ATOM	69	OE1 GLN A 314	13.655	77.446	114.566	1.00	77.23	O
ATOM	70	NE2 GLN A 314	11.658	76.836	113.651	1.00	77.34	N
ATOM	71	N MET A 315	12.583	73.239	118.499	1.00	65.55	N
ATOM	72	CA MET A 315	13.068	71.969	119.030	1.00	62.28	C
ATOM	73	C MET A 315	12.000	71.339	119.919	1.00	59.83	C
ATOM	74	O MET A 315	11.553	70.214	119.677	1.00	58.34	O
ATOM	75	CB MET A 315	14.343	72.216	119.827	1.00	62.34	C
ATOM	76	CG MET A 315	15.067	70.989	120.355	1.00	62.93	C
ATOM	77	SD MET A 315	16.133	70.189	119.107	1.00	63.15	S
ATOM	78	CE MET A 315	15.280	68.593	119.110	1.00	62.24	C
ATOM	79	N VAL A 316	11.566	72.090	120.930	1.00	58.15	N
ATOM	80	CA VAL A 316	10.561	71.585	121.843	1.00	58.08	C
ATOM	81	C VAL A 316	9.325	71.076	121.132	1.00	59.66	C
ATOM	82	O VAL A 316	8.797	70.014	121.489	1.00	60.70	O
ATOM	83	CB VAL A 316	10.092	72.612	122.872	1.00	57.62	C
ATOM	84	CG1 VAL A 316	8.966	72.057	123.736	1.00	57.52	C
ATOM	85	CG2 VAL A 316	11.252	73.023	123.761	1.00	57.79	C
ATOM	86	N SER A 317	8.837	71.839	120.162	1.00	60.60	N
ATOM	87	CA SER A 317	7.618	71.432	119.447	1.00	61.31	C
ATOM	88	C SER A 317	7.878	70.232	118.567	1.00	59.76	C
ATOM	89	O SER A 317	7.093	69.274	118.513	1.00	59.90	O
ATOM	90	CB SER A 317	7.143	72.605	118.598	1.00	63.32	C
ATOM	91	OG SER A 317	8.162	73.594	118.785	1.00	66.63	O
ATOM	92	N ALA A 318	9.036	70.292	117.909	1.00	57.92	N
ATOM	93	CA ALA A 318	9.386	69.137	117.061	1.00	57.19	C
ATOM	94	C ALA A 318	9.282	67.875	117.923	1.00	55.96	C
ATOM	95	O ALA A 318	8.661	66.894	117.520	1.00	55.78	O
ATOM	96	CB ALA A 318	10.790	69.270	116.511	1.00	57.21	C
ATOM	97	N LEU A 319	9.905	67.949	119.102	1.00	54.62	N
ATOM	98	CA LEU A 319	9.903	66.823	120.024	1.00	54.04	C
ATOM	99	C LEU A 319	8.510	66.518	120.526	1.00	55.29	C
ATOM	100	O LEU A 319	8.051	65.371	120.560	1.00	55.14	O
ATOM	101	CB LEU A 319	10.833	67.110	121.193	1.00	51.72	C
ATOM	102	CG LEU A 319	12.316	67.138	120.822	1.00	51.11	C
ATOM	103	CD1 LEU A 319	13.114	67.526	122.055	1.00	50.58	C

ATOM	104	CD2 LEU A 319	12.767	65.812	120.232	1.00	50.24	C
ATOM	105	N LEU A 320	7.794	67.582	120.885	1.00	56.70	N
ATOM	106	CA LEU A 320	6.426	67.386	121.372	1.00	58.80	C
ATOM	107	C LEU A 320	5.587	66.689	120.321	1.00	61.20	C
ATOM	108	O LEU A 320	4.718	65.871	120.579	1.00	61.72	O
ATOM	109	CB LEU A 320	5.867	68.750	121.783	1.00	57.70	C
ATOM	110	CG LEU A 320	6.105	68.990	123.269	1.00	57.68	C
ATOM	111	CD1 LEU A 320	5.658	70.368	123.692	1.00	58.75	C
ATOM	112	CD2 LEU A 320	5.402	67.915	124.081	1.00	57.28	C
ATOM	113	N ASP A 321	5.845	67.007	119.060	1.00	64.39	N
ATOM	114	CA ASP A 321	5.155	66.399	117.958	1.00	67.83	C
ATOM	115	C ASP A 321	5.484	64.951	117.672	1.00	66.45	C
ATOM	116	O ASP A 321	4.575	64.205	117.304	1.00	68.09	O
ATOM	117	CB ASP A 321	5.561	67.162	116.682	1.00	73.23	C
ATOM	118	CG ASP A 321	4.371	68.049	116.346	1.00	78.17	C
ATOM	119	OD1 ASP A 321	3.427	68.108	117.173	1.00	80.30	O
ATOM	120	OD2 ASP A 321	4.437	68.658	115.254	1.00	81.45	O
ATOM	121	N ALA A 322	6.742	64.551	117.828	1.00	62.92	N
ATOM	122	CA ALA A 322	7.106	63.176	117.533	1.00	59.78	C
ATOM	123	C ALA A 322	6.498	62.179	118.493	1.00	58.48	C
ATOM	124	O ALA A 322	6.491	60.986	118.187	1.00	58.35	O
ATOM	125	CB ALA A 322	8.623	63.125	117.574	1.00	59.62	C
ATOM	126	N GLU A 323	6.006	62.621	119.645	1.00	56.77	N
ATOM	127	CA GLU A 323	5.470	61.696	120.623	1.00	55.49	C
ATOM	128	C GLU A 323	4.598	60.657	119.989	1.00	55.69	C
ATOM	129	O GLU A 323	3.777	60.975	119.138	1.00	58.08	O
ATOM	130	CB GLU A 323	4.775	62.515	121.690	1.00	55.82	C
ATOM	131	CG GLU A 323	5.822	63.073	122.666	1.00	57.00	C
ATOM	132	CD GLU A 323	6.302	61.945	123.557	1.00	57.18	C
ATOM	133	OE1 GLU A 323	5.500	61.285	124.241	1.00	57.59	O
ATOM	134	OE2 GLU A 323	7.506	61.678	123.584	1.00	57.83	O
ATOM	135	N PRO A 324	4.769	59.403	120.344	1.00	55.05	N
ATOM	136	CA PRO A 324	3.992	58.282	119.878	1.00	54.38	C
ATOM	137	C PRO A 324	2.646	58.236	120.586	1.00	54.98	C
ATOM	138	O PRO A 324	2.391	58.938	121.554	1.00	55.02	O
ATOM	139	CB PRO A 324	4.750	57.015	120.307	1.00	54.50	C
ATOM	140	CG PRO A 324	5.488	57.513	121.513	1.00	54.68	C
ATOM	141	CD PRO A 324	5.735	58.996	121.376	1.00	55.35	C
ATOM	142	N PRO A 325	1.758	57.400	120.099	1.00	56.07	N
ATOM	143	CA PRO A 325	0.428	57.188	120.623	1.00	56.86	C
ATOM	144	C PRO A 325	0.524	56.397	121.916	1.00	57.84	C
ATOM	145	O PRO A 325	1.583	55.785	122.033	1.00	58.89	O
ATOM	146	CB PRO A 325	-0.290	56.266	119.622	1.00	57.07	C
ATOM	147	CG PRO A 325	0.861	55.568	118.950	1.00	56.52	C
ATOM	148	CD PRO A 325	2.021	56.531	118.938	1.00	56.97	C

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ATOM	149	N	ILE A 326	-0.451	56.378	122.791	1.00	59.06	N
ATOM	150	CA	ILE A 326	-0.338	55.588	124.008	1.00	61.54	C
ATOM	151	C	ILE A 326	-1.018	54.251	123.697	1.00	59.89	C
ATOM	152	O	ILE A 326	-2.161	54.341	123.282	1.00	61.16	O
ATOM	153	CB	ILE A 326	-1.001	56.112	125.289	1.00	64.29	C
ATOM	154	CG1	ILE A 326	-2.470	56.502	125.085	1.00	67.10	C
ATOM	155	CG2	ILE A 326	-0.216	57.279	125.892	1.00	64.63	C
ATOM	156	CD1	ILE A 326	-2.843	57.394	123.904	1.00	68.03	C
ATOM	157	N	LEU A 327	-0.401	53.113	123.835	1.00	58.15	N
ATOM	158	CA	LEU A 327	-1.087	51.879	123.529	1.00	58.39	C
ATOM	159	C	LEU A 327	-1.971	51.443	124.683	1.00	60.26	C
ATOM	160	O	LEU A 327	-1.907	52.011	125.770	1.00	61.33	O
ATOM	161	CB	LEU A 327	0.002	50.847	123.242	1.00	58.19	C
ATOM	162	CG	LEU A 327	1.038	51.228	122.185	1.00	57.89	C
ATOM	163	CD1	LEU A 327	1.728	49.974	121.650	1.00	57.24	C
ATOM	164	CD2	LEU A 327	0.489	52.036	121.026	1.00	56.54	C
ATOM	165	N	TYR A 328	-2.811	50.439	124.468	1.00	61.48	N
ATOM	166	CA	TYR A 328	-3.682	49.922	125.501	1.00	62.99	C
ATOM	167	C	TYR A 328	-3.211	48.479	125.681	1.00	63.61	C
ATOM	168	O	TYR A 328	-2.839	47.923	124.662	1.00	63.05	O
ATOM	169	CB	TYR A 328	-5.176	49.932	125.147	1.00	63.80	C
ATOM	170	CG	TYR A 328	-5.796	51.287	125.414	1.00	64.83	C
ATOM	171	CD1	TYR A 328	-6.332	51.632	126.645	1.00	65.49	C
ATOM	172	CD2	TYR A 328	-5.822	52.238	124.409	1.00	65.33	C
ATOM	173	CE1	TYR A 328	-6.884	52.888	126.845	1.00	66.31	C
ATOM	174	CE2	TYR A 328	-6.359	53.498	124.595	1.00	65.86	C
ATOM	175	CZ	TYR A 328	-6.891	53.820	125.822	1.00	66.51	C
ATOM	176	OH	TYR A 328	-7.428	55.072	126.047	1.00	67.17	O
ATOM	177	N	SER A 329	-3.229	47.944	126.884	1.00	65.41	N
ATOM	178	CA	SER A 329	-2.794	46.581	127.059	1.00	67.41	C
ATOM	179	C	SER A 329	-3.864	45.674	126.481	1.00	70.58	C
ATOM	180	O	SER A 329	-5.032	46.016	126.546	1.00	71.36	O
ATOM	181	CB	SER A 329	-2.644	46.257	128.537	1.00	67.21	C
ATOM	182	OG	SER A 329	-2.716	44.832	128.624	1.00	68.19	O
ATOM	183	N	GLU A 330	-3.468	44.541	125.957	1.00	75.32	N
ATOM	184	CA	GLU A 330	-4.358	43.539	125.398	1.00	79.68	C
ATOM	185	C	GLU A 330	-5.190	42.945	126.539	1.00	80.39	C
ATOM	186	O	GLU A 330	-4.696	42.668	127.629	1.00	79.74	O
ATOM	187	CB	GLU A 330	-3.572	42.435	124.705	1.00	83.33	C
ATOM	188	CG	GLU A 330	-3.689	41.050	125.293	1.00	88.46	C
ATOM	189	CD	GLU A 330	-2.496	40.557	126.087	1.00	91.66	C
ATOM	190	OE1	GLU A 330	-1.512	40.057	125.466	1.00	92.83	O
ATOM	191	OE2	GLU A 330	-2.573	40.655	127.341	1.00	93.17	O
ATOM	192	N	PHE A 337	-3.376	36.663	137.026	1.00	85.14	N
ATOM	193	CA	PHE A 337	-1.980	37.049	136.956	1.00	85.09	C

ATOM	194	C	PHE A 337	-1.063	35.943	137.467	1.00	84.18	C
ATOM	195	O	PHE A 337	-1.265	35.462	138.586	1.00	85.82	O
ATOM	196	CB	PHE A 337	-1.637	38.290	137.792	1.00	85.91	C
ATOM	197	CG	PHE A 337	-1.935	39.562	137.066	1.00	87.33	C
ATOM	198	CD1	PHE A 337	-1.887	39.624	135.688	1.00	87.97	C
ATOM	199	CD2	PHE A 337	-2.281	40.704	137.768	1.00	88.36	C
ATOM	200	CE1	PHE A 337	-2.174	40.795	135.018	1.00	88.74	C
ATOM	201	CE2	PHE A 337	-2.569	41.889	137.115	1.00	88.71	C
ATOM	202	CZ	PHE A 337	-2.511	41.929	135.731	1.00	89.02	C
ATOM	203	N	SER A 338	-0.088	35.593	136.656	1.00	81.27	N
ATOM	204	CA	SER A 338	0.862	34.568	137.095	1.00	79.24	C
ATOM	205	C	SER A 338	2.197	35.011	136.526	1.00	77.73	C
ATOM	206	O	SER A 338	2.151	35.720	135.505	1.00	77.70	O
ATOM	207	CB	SER A 338	0.466	33.226	136.508	1.00	79.63	C
ATOM	208	OG	SER A 338	0.172	33.403	135.127	1.00	79.50	O
ATOM	209	N	GLU A 339	3.316	34.607	137.105	1.00	75.56	N
ATOM	210	CA	GLU A 339	4.599	35.030	136.502	1.00	73.45	C
ATOM	211	C	GLU A 339	4.418	35.010	134.987	1.00	71.57	C
ATOM	212	O	GLU A 339	4.479	36.068	134.350	1.00	71.50	O
ATOM	213	CB	GLU A 339	5.667	34.110	137.036	1.00	73.55	C
ATOM	214	CG	GLU A 339	6.923	33.879	136.221	1.00	74.09	C
ATOM	215	CD	GLU A 339	8.034	33.634	137.236	1.00	75.35	C
ATOM	216	OE1	GLU A 339	8.182	34.458	138.169	1.00	75.57	O
ATOM	217	OE2	GLU A 339	8.718	32.602	137.090	1.00	76.52	O
ATOM	218	N	ALA A 340	4.113	33.866	134.379	1.00	69.47	N
ATOM	219	CA	ALA A 340	3.901	33.801	132.942	1.00	67.81	C
ATOM	220	C	ALA A 340	2.830	34.738	132.396	1.00	66.83	C
ATOM	221	O	ALA A 340	3.078	35.410	131.398	1.00	67.12	O
ATOM	222	CB	ALA A 340	3.532	32.387	132.519	1.00	67.70	C
ATOM	223	N	SER A 341	1.640	34.815	132.968	1.00	65.62	N
ATOM	224	CA	SER A 341	0.611	35.685	132.433	1.00	65.04	C
ATOM	225	C	SER A 341	1.060	37.134	132.542	1.00	64.47	C
ATOM	226	O	SER A 341	0.791	37.869	131.584	1.00	64.71	O
ATOM	227	CB	SER A 341	-0.727	35.426	133.105	1.00	66.95	C
ATOM	228	OG	SER A 341	-1.262	36.521	133.843	1.00	69.52	O
ATOM	229	N	MET A 342	1.690	37.544	133.653	1.00	63.01	N
ATOM	230	CA	MET A 342	2.122	38.925	133.785	1.00	61.54	C
ATOM	231	C	MET A 342	3.271	39.274	132.834	1.00	60.63	C
ATOM	232	O	MET A 342	3.201	40.256	132.083	1.00	60.85	O
ATOM	233	CB	MET A 342	2.590	39.326	135.187	1.00	61.39	C
ATOM	234	CG	MET A 342	2.608	40.863	135.202	1.00	62.48	C
ATOM	235	SD	MET A 342	2.437	41.498	136.871	1.00	65.11	S
ATOM	236	CE	MET A 342	3.996	40.862	137.529	1.00	64.16	C
ATOM	237	N	MET A 343	4.334	38.464	132.825	1.00	58.38	N
ATOM	238	CA	MET A 343	5.441	38.701	131.914	1.00	56.67	C

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ATOM	239	C	MET A 343	4.863	38.836	130.511	1.00	57.16	C
ATOM	240	O	MET A 343	5.226	39.762	129.786	1.00	58.46	O
ATOM	241	CB	MET A 343	6.431	37.550	131.961	1.00	56.18	C
ATOM	242	CG	MET A 343	7.321	37.682	133.190	1.00	56.31	C
ATOM	243	SD	MET A 343	8.204	39.248	133.273	1.00	56.60	S
ATOM	244	CE	MET A 343	8.874	39.359	131.604	1.00	55.24	C
ATOM	245	N	GLY A 344	3.925	37.967	130.120	1.00	55.99	N
ATOM	246	CA	GLY A 344	3.273	38.073	128.833	1.00	53.83	C
ATOM	247	C	GLY A 344	2.718	39.465	128.578	1.00	52.90	C
ATOM	248	O	GLY A 344	3.122	40.066	127.583	1.00	53.02	O
ATOM	249	N	LEU A 345	1.827	40.019	129.394	1.00	52.76	N
ATOM	250	CA	LEU A 345	1.305	41.347	129.094	1.00	53.20	C
ATOM	251	C	LEU A 345	2.394	42.408	128.910	1.00	52.33	C
ATOM	252	O	LEU A 345	2.487	43.119	127.925	1.00	52.10	O
ATOM	253	CB	LEU A 345	0.464	41.917	130.219	1.00	54.25	C
ATOM	254	CG	LEU A 345	-0.848	41.244	130.534	1.00	55.33	C
ATOM	255	CD1	LEU A 345	-0.756	40.738	131.968	1.00	56.61	C
ATOM	256	CD2	LEU A 345	-1.953	42.272	130.348	1.00	55.75	C
ATOM	257	N	LEU A 346	3.198	42.523	129.967	1.00	50.67	N
ATOM	258	CA	LEU A 346	4.281	43.498	130.014	1.00	48.34	C
ATOM	259	C	LEU A 346	5.124	43.395	128.760	1.00	47.59	C
ATOM	260	O	LEU A 346	5.370	44.335	128.000	1.00	47.20	O
ATOM	261	CB	LEU A 346	5.013	43.231	131.323	1.00	47.25	C
ATOM	262	CG	LEU A 346	4.269	43.696	132.570	1.00	46.58	C
ATOM	263	CD1	LEU A 346	5.252	43.653	133.732	1.00	46.95	C
ATOM	264	CD2	LEU A 346	3.689	45.090	132.428	1.00	45.64	C
ATOM	265	N	THR A 347	5.556	42.174	128.487	1.00	46.40	N
ATOM	266	CA	THR A 347	6.374	41.860	127.321	1.00	45.75	C
ATOM	267	C	THR A 347	5.697	42.169	126.020	1.00	46.81	C
ATOM	268	O	THR A 347	6.265	42.727	125.081	1.00	46.83	O
ATOM	269	CB	THR A 347	6.733	40.397	127.565	1.00	45.43	C
ATOM	270	OG1	THR A 347	8.148	40.411	127.801	1.00	47.31	O
ATOM	271	CG2	THR A 347	6.253	39.444	126.535	1.00	44.20	C
ATOM	272	N	ASN A 348	4.409	41.866	125.902	1.00	48.83	N
ATOM	273	CA	ASN A 348	3.607	42.153	124.716	1.00	48.72	C
ATOM	274	C	ASN A 348	3.511	43.662	124.507	1.00	47.34	C
ATOM	275	O	ASN A 348	3.719	44.247	123.449	1.00	47.88	O
ATOM	276	CB	ASN A 348	2.210	41.560	124.918	1.00	51.06	C
ATOM	277	CG	ASN A 348	1.272	41.891	123.765	1.00	54.34	C
ATOM	278	OD1	ASN A 348	0.504	42.881	123.743	1.00	55.31	O
ATOM	279	ND2	ASN A 348	1.371	40.995	122.770	1.00	55.16	N
ATOM	280	N	LEU A 349	3.194	44.396	125.563	1.00	45.51	N
ATOM	281	CA	LEU A 349	3.045	45.841	125.500	1.00	43.88	C
ATOM	282	C	LEU A 349	4.366	46.413	125.034	1.00	44.02	C
ATOM	283	O	LEU A 349	4.397	47.250	124.128	1.00	43.98	O

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ATOM	284	CB	LEU A 349	2.597	46.340	126.878	1.00	44.61	C
ATOM	285	CG	LEU A 349	2.401	47.854	126.972	1.00	45.15	C
ATOM	286	CD1	LEU A 349	1.354	48.294	125.964	1.00	45.55	C
ATOM	287	CD2	LEU A 349	2.014	48.325	128.358	1.00	45.19	C
ATOM	288	N	ALA A 350	5.489	45.958	125.615	1.00	43.72	N
ATOM	289	CA	ALA A 350	6.818	46.432	125.216	1.00	42.64	C
ATOM	290	C	ALA A 350	7.023	46.190	123.724	1.00	42.80	C
ATOM	291	O	ALA A 350	7.291	47.135	122.996	1.00	42.61	O
ATOM	292	CB	ALA A 350	7.949	45.739	125.956	1.00	41.26	C
ATOM	293	N	ASP A 351	6.839	44.944	123.276	1.00	43.48	N
ATOM	294	CA	ASP A 351	6.997	44.638	121.871	1.00	45.42	C
ATOM	295	C	ASP A 351	6.223	45.576	120.945	1.00	45.86	C
ATOM	296	O	ASP A 351	6.686	45.967	119.856	1.00	46.01	O
ATOM	297	CB	ASP A 351	6.633	43.184	121.612	1.00	47.72	C
ATOM	298	CG	ASP A 351	6.905	42.840	120.149	1.00	50.33	C
ATOM	299	OD1	ASP A 351	8.043	42.706	119.656	1.00	49.95	O
ATOM	300	OD2	ASP A 351	5.887	42.687	119.433	1.00	53.18	O
ATOM	301	N	ARG A 352	5.018	45.967	121.331	1.00	45.40	N
ATOM	302	CA	ARG A 352	4.237	46.886	120.529	1.00	45.67	C
ATOM	303	C	ARG A 352	4.783	48.299	120.572	1.00	46.20	C
ATOM	304	O	ARG A 352	4.937	48.907	119.502	1.00	47.67	O
ATOM	305	CB	ARG A 352	2.817	46.836	121.056	1.00	46.38	C
ATOM	306	CG	ARG A 352	2.174	45.538	120.584	1.00	48.04	C
ATOM	307	CD	ARG A 352	0.680	45.902	120.387	1.00	50.42	C
ATOM	308	NE	ARG A 352	0.095	45.703	121.723	1.00	52.44	N
ATOM	309	CZ	ARG A 352	-0.723	46.610	122.289	1.00	53.34	C
ATOM	310	NH1	ARG A 352	-1.042	47.739	121.644	1.00	52.42	N
ATOM	311	NH2	ARG A 352	-1.132	46.217	123.500	1.00	53.07	N
ATOM	312	N	GLU A 353	5.141	48.837	121.745	1.00	45.01	N
ATOM	313	CA	GLU A 353	5.680	50.194	121.773	1.00	43.53	C
ATOM	314	C	GLU A 353	6.968	50.299	120.966	1.00	42.80	C
ATOM	315	O	GLU A 353	7.305	51.370	120.459	1.00	43.00	O
ATOM	316	CB	GLU A 353	5.966	50.620	123.198	1.00	43.41	C
ATOM	317	CG	GLU A 353	4.910	50.245	124.204	1.00	44.09	C
ATOM	318	CD	GLU A 353	5.154	50.924	125.538	1.00	44.78	C
ATOM	319	OE1	GLU A 353	5.187	52.154	125.617	1.00	43.92	O
ATOM	320	OE2	GLU A 353	5.323	50.176	126.525	1.00	46.56	O
ATOM	321	N	LEU A 354	7.704	49.198	120.834	1.00	41.84	N
ATOM	322	CA	LEU A 354	8.969	49.195	120.124	1.00	42.17	C
ATOM	323	C	LEU A 354	8.804	49.655	118.698	1.00	42.86	C
ATOM	324	O	LEU A 354	9.616	50.399	118.160	1.00	42.54	O
ATOM	325	CB	LEU A 354	9.642	47.827	120.218	1.00	41.39	C
ATOM	326	CG	LEU A 354	10.467	47.775	121.518	1.00	41.35	C
ATOM	327	CD1	LEU A 354	10.648	46.351	121.978	1.00	41.91	C
ATOM	328	CD2	LEU A 354	11.783	48.483	121.295	1.00	41.15	C

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ATOM	329	N	VAL A 355	7.698	49.203	118.103	1.00	43.57	N
ATOM	330	CA	VAL A 355	7.424	49.649	116.733	1.00	42.80	C
ATOM	331	C	VAL A 355	7.268	51.167	116.754	1.00	44.35	C
ATOM	332	O	VAL A 355	7.982	51.901	116.058	1.00	44.80	O
ATOM	333	CB	VAL A 355	6.142	48.974	116.268	1.00	40.41	C
ATOM	334	CG1	VAL A 355	5.838	49.431	114.878	1.00	39.85	C
ATOM	335	CG2	VAL A 355	6.385	47.492	116.364	1.00	41.41	C
ATOM	336	N	HIS A 356	6.361	51.672	117.597	1.00	44.18	N
ATOM	337	CA	HIS A 356	6.178	53.115	117.631	1.00	45.93	C
ATOM	338	C	HIS A 356	7.484	53.818	117.909	1.00	44.50	C
ATOM	339	O	HIS A 356	7.691	54.886	117.348	1.00	44.30	O
ATOM	340	CB	HIS A 356	5.074	53.470	118.667	1.00	49.34	C
ATOM	341	CG	HIS A 356	3.801	52.906	118.115	1.00	51.75	C
ATOM	342	ND1	HIS A 356	2.806	53.687	117.571	1.00	53.41	N
ATOM	343	CD2	HIS A 356	3.422	51.617	117.985	1.00	52.93	C
ATOM	344	CE1	HIS A 356	1.840	52.884	117.133	1.00	54.25	C
ATOM	345	NE2	HIS A 356	2.186	51.619	117.369	1.00	54.33	N
ATOM	346	N	MET A 357	8.303	53.240	118.784	1.00	43.74	N
ATOM	347	CA	MET A 357	9.564	53.819	119.185	1.00	43.00	C
ATOM	348	C	MET A 357	10.472	54.177	118.015	1.00	42.86	C
ATOM	349	O	MET A 357	10.973	55.288	117.903	1.00	42.82	O
ATOM	350	CB	MET A 357	10.385	52.909	120.117	1.00	42.65	C
ATOM	351	CG	MET A 357	11.501	53.799	120.720	1.00	43.39	C
ATOM	352	SD	MET A 357	12.579	52.768	121.725	1.00	44.21	S
ATOM	353	CE	MET A 357	11.526	52.625	123.168	1.00	44.48	C
ATOM	354	N	ILE A 358	10.665	53.188	117.151	1.00	42.08	N
ATOM	355	CA	ILE A 358	11.465	53.306	115.961	1.00	40.73	C
ATOM	356	C	ILE A 358	10.980	54.507	115.168	1.00	42.35	C
ATOM	357	O	ILE A 358	11.811	55.315	114.760	1.00	43.21	O
ATOM	358	CB	ILE A 358	11.334	52.029	115.114	1.00	39.01	C
ATOM	359	CG1	ILE A 358	11.888	50.851	115.908	1.00	38.76	C
ATOM	360	CG2	ILE A 358	12.064	52.170	113.799	1.00	37.79	C
ATOM	361	CD1	ILE A 358	11.865	49.519	115.206	1.00	38.39	C
ATOM	362	N	ASN A 359	9.683	54.631	114.950	1.00	44.26	N
ATOM	363	CA	ASN A 359	9.114	55.742	114.220	1.00	46.79	C
ATOM	364	C	ASN A 359	9.443	57.060	114.880	1.00	46.25	C
ATOM	365	O	ASN A 359	9.899	58.021	114.275	1.00	48.11	O
ATOM	366	CB	ASN A 359	7.587	55.634	114.159	1.00	51.74	C
ATOM	367	CG	ASN A 359	7.290	54.604	113.091	1.00	56.17	C
ATOM	368	OD1	ASN A 359	7.650	54.927	111.954	1.00	60.30	O
ATOM	369	ND2	ASN A 359	6.727	53.450	113.387	1.00	57.83	N
ATOM	370	N	TRP A 360	9.230	57.118	116.178	1.00	44.87	N
ATOM	371	CA	TRP A 360	9.519	58.318	116.939	1.00	43.49	C
ATOM	372	C	TRP A 360	10.969	58.707	116.765	1.00	43.83	C
ATOM	373	O	TRP A 360	11.335	59.846	116.544	1.00	44.37	O

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ATOM	374	CB	TRP	A 360	9.268	57.954	118.392	1.00	42.53	C
ATOM	375	CG	TRP	A 360	9.913	58.953	119.301	1.00	43.10	C
ATOM	376	CD1	TRP	A 360	9.463	60.210	119.571	1.00	43.10	C
ATOM	377	CD2	TRP	A 360	11.114	58.770	120.057	1.00	43.07	C
ATOM	378	NE1	TRP	A 360	10.314	60.817	120.448	1.00	43.67	N
ATOM	379	CE2	TRP	A 360	11.335	59.958	120.768	1.00	43.61	C
ATOM	380	CE3	TRP	A 360	12.019	57.723	120.194	1.00	43.09	C
ATOM	381	CZ2	TRP	A 360	12.426	60.150	121.617	1.00	43.58	C
ATOM	382	CZ3	TRP	A 360	13.102	57.920	121.024	1.00	44.07	C
ATOM	383	CH2	TRP	A 360	13.304	59.111	121.732	1.00	43.80	C
ATOM	384	N	ALA	A 361	11.869	57.735	116.888	1.00	45.32	N
ATOM	385	CA	ALA	A 361	13.303	57.983	116.771	1.00	45.58	C
ATOM	386	C	ALA	A 361	13.575	58.748	115.489	1.00	46.83	C
ATOM	387	O	ALA	A 361	14.330	59.719	115.538	1.00	46.98	O
ATOM	388	CB	ALA	A 361	14.078	56.686	116.840	1.00	44.50	C
ATOM	389	N	LYS	A 362	12.959	58.380	114.372	1.00	48.34	N
ATOM	390	CA	LYS	A 362	13.207	59.033	113.106	1.00	50.58	C
ATOM	391	C	LYS	A 362	12.907	60.508	113.100	1.00	50.88	C
ATOM	392	O	LYS	A 362	13.456	61.175	112.231	1.00	51.42	O
ATOM	393	CB	LYS	A 362	12.485	58.322	111.966	1.00	52.62	C
ATOM	394	CG	LYS	A 362	13.035	56.917	111.760	1.00	55.71	C
ATOM	395	CD	LYS	A 362	14.387	57.032	111.076	1.00	59.22	C
ATOM	396	CE	LYS	A 362	14.524	56.032	109.926	1.00	62.25	C
ATOM	397	NZ	LYS	A 362	15.709	56.341	109.035	1.00	64.54	N
ATOM	398	N	ARG	A 363	12.110	61.048	113.974	1.00	51.58	N
ATOM	399	CA	ARG	A 363	11.785	62.450	114.045	1.00	53.69	C
ATOM	400	C	ARG	A 363	12.594	63.209	115.090	1.00	53.02	C
ATOM	401	O	ARG	A 363	12.305	64.399	115.299	1.00	53.79	O
ATOM	402	CB	ARG	A 363	10.315	62.631	114.474	1.00	56.98	C
ATOM	403	CG	ARG	A 363	9.582	61.312	114.322	1.00	63.56	C
ATOM	404	CD	ARG	A 363	9.117	61.289	112.835	1.00	69.94	C
ATOM	405	NE	ARG	A 363	8.089	62.353	112.824	1.00	75.38	N
ATOM	406	CZ	ARG	A 363	6.929	62.184	113.480	1.00	78.35	C
ATOM	407	NH1	ARG	A 363	6.676	61.046	114.134	1.00	79.67	N
ATOM	408	NH2	ARG	A 363	6.051	63.193	113.446	1.00	80.13	N
ATOM	409	N	VAL	A 364	13.507	62.599	115.836	1.00	51.20	N
ATOM	410	CA	VAL	A 364	14.219	63.406	116.858	1.00	48.91	C
ATOM	411	C	VAL	A 364	15.256	64.176	116.076	1.00	48.54	C
ATOM	412	O	VAL	A 364	16.138	63.589	115.462	1.00	49.24	O
ATOM	413	CB	VAL	A 364	14.821	62.482	117.916	1.00	47.40	C
ATOM	414	CG1	VAL	A 364	15.741	63.200	118.872	1.00	46.24	C
ATOM	415	CG2	VAL	A 364	13.677	61.813	118.654	1.00	47.03	C
ATOM	416	N	PRO	A 365	15.170	65.480	116.033	1.00	48.39	N
ATOM	417	CA	PRO	A 365	16.097	66.322	115.282	1.00	47.91	C
ATOM	418	C	PRO	A 365	17.509	65.821	115.405	1.00	47.69	C

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ATOM	419	O	PRO A 365	17.971	65.570	116.509	1.00	49.38	O
ATOM	420	CB	PRO A 365	15.903	67.748	115.822	1.00	47.32	C
ATOM	421	CG	PRO A 365	14.412	67.652	116.118	1.00	48.06	C
ATOM	422	CD	PRO A 365	14.140	66.277	116.716	1.00	48.28	C
ATOM	423	N	GLY A 366	18.197	65.616	114.304	1.00	47.73	N
ATOM	424	CA	GLY A 366	19.573	65.178	114.242	1.00	47.06	C
ATOM	425	C	GLY A 366	19.776	63.692	114.099	1.00	47.16	C
ATOM	426	O	GLY A 366	20.835	63.259	113.659	1.00	47.88	O
ATOM	427	N	PHE A 367	18.790	62.889	114.477	1.00	47.22	N
ATOM	428	CA	PHE A 367	18.889	61.440	114.464	1.00	47.22	C
ATOM	429	C	PHE A 367	19.212	60.827	113.111	1.00	47.24	C
ATOM	430	O	PHE A 367	20.124	60.047	112.830	1.00	46.44	O
ATOM	431	CB	PHE A 367	17.594	60.806	114.968	1.00	46.00	C
ATOM	432	CG	PHE A 367	17.697	59.321	115.172	1.00	46.50	C
ATOM	433	CD1	PHE A 367	18.426	58.795	116.232	1.00	46.47	C
ATOM	434	CD2	PHE A 367	17.067	58.441	114.309	1.00	46.08	C
ATOM	435	CE1	PHE A 367	18.523	57.432	116.438	1.00	46.01	C
ATOM	436	CE2	PHE A 367	17.160	57.074	114.528	1.00	46.50	C
ATOM	437	CZ	PHE A 367	17.882	56.554	115.589	1.00	45.75	C
ATOM	438	N	VAL A 368	18.371	61.269	112.199	1.00	47.62	N
ATOM	439	CA	VAL A 368	18.374	60.858	110.797	1.00	47.41	C
ATOM	440	C	VAL A 368	19.650	61.244	110.112	1.00	47.73	C
ATOM	441	O	VAL A 368	19.901	60.612	109.101	1.00	48.36	O
ATOM	442	CB	VAL A 368	17.125	61.454	110.136	1.00	46.86	C
ATOM	443	CG1	VAL A 368	17.420	62.152	108.846	1.00	47.96	C
ATOM	444	CG2	VAL A 368	16.101	60.354	109.960	1.00	46.89	C
ATOM	445	N	ASP A 369	20.424	62.189	110.616	1.00	48.68	N
ATOM	446	CA	ASP A 369	21.695	62.531	110.013	1.00	49.52	C
ATOM	447	C	ASP A 369	22.710	61.443	110.308	1.00	47.42	C
ATOM	448	O	ASP A 369	23.787	61.548	109.748	1.00	49.03	O
ATOM	449	CB	ASP A 369	22.277	63.845	110.556	1.00	53.35	C
ATOM	450	CG	ASP A 369	21.336	65.022	110.412	1.00	57.47	C
ATOM	451	OD1	ASP A 369	20.601	65.118	109.393	1.00	59.66	O
ATOM	452	OD2	ASP A 369	21.303	65.885	111.327	1.00	59.04	O
ATOM	453	N	LEU A 370	22.522	60.450	111.138	1.00	46.30	N
ATOM	454	CA	LEU A 370	23.536	59.428	111.403	1.00	45.24	C
ATOM	455	C	LEU A 370	23.457	58.314	110.382	1.00	44.34	C
ATOM	456	O	LEU A 370	22.434	58.171	109.701	1.00	43.23	O
ATOM	457	CB	LEU A 370	23.300	58.888	112.819	1.00	45.60	C
ATOM	458	CG	LEU A 370	23.446	59.923	113.939	1.00	45.74	C
ATOM	459	CD1	LEU A 370	23.173	59.313	115.301	1.00	45.87	C
ATOM	460	CD2	LEU A 370	24.871	60.487	113.901	1.00	45.51	C
ATOM	461	N	THR A 371	24.499	57.499	110.215	1.00	44.24	N
ATOM	462	CA	THR A 371	24.364	56.429	109.204	1.00	43.33	C
ATOM	463	C	THR A 371	23.278	55.478	109.682	1.00	44.46	C

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ATOM	464	O	THR A 371	23.058	55.270	110.884	1.00	44.89	O
ATOM	465	CB	THR A 371	25.644	55.614	109.113	1.00	42.88	C
ATOM	466	OG1	THR A 371	25.991	55.295	110.475	1.00	44.81	O
ATOM	467	CG2	THR A 371	26.725	56.466	108.523	1.00	43.53	C
ATOM	468	N	LEU A 372	22.612	54.833	108.732	1.00	44.94	N
ATOM	469	CA	LEU A 372	21.566	53.878	109.072	1.00	44.26	C
ATOM	470	C	LEU A 372	22.010	52.901	110.145	1.00	45.89	C
ATOM	471	O	LEU A 372	21.196	52.643	111.048	1.00	47.02	O
ATOM	472	CB	LEU A 372	21.134	53.178	107.795	1.00	42.97	C
ATOM	473	CG	LEU A 372	20.398	54.060	106.787	1.00	41.97	C
ATOM	474	CD1	LEU A 372	20.048	53.301	105.517	1.00	42.70	C
ATOM	475	CD2	LEU A 372	19.081	54.519	107.349	1.00	42.33	C
ATOM	476	N	HIS A 373	23.218	52.342	110.147	1.00	46.19	N
ATOM	477	CA	HIS A 373	23.573	51.402	111.202	1.00	46.22	C
ATOM	478	C	HIS A 373	23.685	52.125	112.517	1.00	45.75	C
ATOM	479	O	HIS A 373	23.243	51.528	113.511	1.00	44.61	O
ATOM	480	CB	HIS A 373	24.830	50.649	110.770	1.00	49.78	C
ATOM	481	CG	HIS A 373	24.489	49.599	109.749	1.00	52.88	C
ATOM	482	ND1	HIS A 373	24.700	49.707	108.383	1.00	53.25	N
ATOM	483	CD2	HIS A 373	23.924	48.383	109.900	1.00	53.27	C
ATOM	484	CE1	HIS A 373	24.281	48.599	107.798	1.00	53.55	C
ATOM	485	NE2	HIS A 373	23.789	47.764	108.710	1.00	53.71	N
ATOM	486	N	ASP A 374	24.215	53.363	112.528	1.00	45.13	N
ATOM	487	CA	ASP A 374	24.295	54.063	113.820	1.00	45.24	C
ATOM	488	C	ASP A 374	22.935	54.294	114.452	1.00	44.56	C
ATOM	489	O	ASP A 374	22.795	54.190	115.673	1.00	44.65	O
ATOM	490	CB	ASP A 374	25.127	55.336	113.680	1.00	46.38	C
ATOM	491	CG	ASP A 374	26.554	54.825	113.562	1.00	49.02	C
ATOM	492	OD1	ASP A 374	26.732	53.613	113.888	1.00	49.79	O
ATOM	493	OD2	ASP A 374	27.470	55.582	113.162	1.00	51.05	O
ATOM	494	N	GLN A 375	21.917	54.575	113.648	1.00	42.92	N
ATOM	495	CA	GLN A 375	20.588	54.739	114.188	1.00	42.51	C
ATOM	496	C	GLN A 375	20.207	53.417	114.817	1.00	43.01	C
ATOM	497	O	GLN A 375	19.822	53.394	115.992	1.00	44.65	O
ATOM	498	CB	GLN A 375	19.654	55.118	113.076	1.00	43.53	C
ATOM	499	CG	GLN A 375	20.088	56.418	112.420	1.00	45.48	C
ATOM	500	CD	GLN A 375	19.210	56.773	111.235	1.00	46.42	C
ATOM	501	OE1	GLN A 375	18.039	56.404	111.105	1.00	46.13	O
ATOM	502	NE2	GLN A 375	19.821	57.519	110.324	1.00	47.37	N
ATOM	503	N	VAL A 376	20.329	52.291	114.126	1.00	42.62	N
ATOM	504	CA	VAL A 376	19.983	51.018	114.772	1.00	42.53	C
ATOM	505	C	VAL A 376	20.786	50.895	116.073	1.00	43.65	C
ATOM	506	O	VAL A 376	20.260	50.529	117.143	1.00	44.09	O
ATOM	507	CB	VAL A 376	20.187	49.810	113.862	1.00	41.72	C
ATOM	508	CG1	VAL A 376	19.460	48.614	114.409	1.00	41.46	C

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ATOM	509	CG2 VAL A 376	19.678	50.043	112.470	1.00	41.24	C
ATOM	510	N HIS A 377	22.084	51.217	116.070	1.00	44.00	N
ATOM	511	CA HIS A 377	22.862	51.122	117.311	1.00	44.29	C
ATOM	512	C HIS A 377	22.207	51.939	118.391	1.00	43.37	C
ATOM	513	O HIS A 377	21.742	51.336	119.374	1.00	43.90	O
ATOM	514	CB HIS A 377	24.338	51.440	117.072	1.00	45.80	C
ATOM	515	CG AHIS A 377	25.234	51.413	118.257	0.50	43.86	C
ATOM	516	CG BHIS A 377	24.997	50.325	116.304	0.50	49.32	C
ATOM	517	ND1AHIS A 377	25.579	50.251	118.900	0.50	43.88	N
ATOM	518	ND1BHIS A 377	25.660	50.533	115.102	0.50	49.88	N
ATOM	519	CD2AHIS A 377	25.851	52.414	118.922	0.50	43.86	C
ATOM	520	CD2BHIS A 377	25.079	48.992	116.566	0.50	50.24	C
ATOM	521	CE1AHIS A 377	26.363	50.551	119.929	0.50	43.89	C
ATOM	522	CE1BHIS A 377	26.134	49.383	114.651	0.50	50.07	C
ATOM	523	NE2AHIS A 377	26.540	51.855	119.967	0.50	43.63	N
ATOM	524	NE2BHIS A 377	25.794	48.435	115.513	0.50	50.92	N
ATOM	525	N LEU A 378	22.061	53.258	118.315	1.00	42.63	N
ATOM	526	CA LEU A 378	21.405	53.983	119.429	1.00	40.72	C
ATOM	527	C LEU A 378	20.107	53.312	119.835	1.00	40.11	C
ATOM	528	O LEU A 378	19.753	53.109	121.005	1.00	39.15	O
ATOM	529	CB LEU A 378	21.258	55.456	119.080	1.00	40.42	C
ATOM	530	CG LEU A 378	22.506	56.168	118.535	1.00	40.79	C
ATOM	531	CD1 LEU A 378	22.236	57.643	118.269	1.00	40.03	C
ATOM	532	CD2 LEU A 378	23.669	56.019	119.499	1.00	40.30	C
ATOM	533	N LEU A 379	19.292	52.894	118.863	1.00	40.19	N
ATOM	534	CA LEU A 379	18.030	52.246	119.215	1.00	39.92	C
ATOM	535	C LEU A 379	18.293	51.031	120.068	1.00	40.35	C
ATOM	536	O LEU A 379	17.834	50.969	121.200	1.00	39.93	O
ATOM	537	CB LEU A 379	17.254	51.892	117.953	1.00	39.44	C
ATOM	538	CG LEU A 379	16.295	53.056	117.618	1.00	40.06	C
ATOM	539	CD1 LEU A 379	15.706	52.683	116.264	1.00	40.69	C
ATOM	540	CD2 LEU A 379	15.288	53.344	118.729	1.00	38.01	C
ATOM	541	N GLU A 380	19.076	50.090	119.513	1.00	41.18	N
ATOM	542	CA GLU A 380	19.391	48.894	120.282	1.00	42.01	C
ATOM	543	C GLU A 380	19.959	49.277	121.641	1.00	43.23	C
ATOM	544	O GLU A 380	19.632	48.655	122.633	1.00	44.35	O
ATOM	545	CB GLU A 380	20.396	48.061	119.531	1.00	41.55	C
ATOM	546	CG GLU A 380	19.871	47.462	118.240	1.00	44.58	C
ATOM	547	CD GLU A 380	21.043	46.808	117.525	1.00	46.88	C
ATOM	548	OE1 GLU A 380	22.196	47.288	117.699	1.00	49.39	O
ATOM	549	OE2 GLU A 380	20.901	45.823	116.784	1.00	47.67	O
ATOM	550	N CYS A 381	20.809	50.288	121.736	1.00	44.61	N
ATOM	551	CA CYS A 381	21.374	50.643	123.006	1.00	46.93	C
ATOM	552	C CYS A 381	20.382	51.205	123.988	1.00	44.14	C
ATOM	553	O CYS A 381	20.441	50.771	125.131	1.00	43.47	O

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ATOM	554	CB	CYS A 381	22.630	51.531	122.807	1.00	52.10	C
ATOM	555	SG	CYS A 381	24.154	50.637	123.375	1.00	64.30	S
ATOM	556	N	ALA A 382	19.496	52.118	123.659	1.00	42.34	N
ATOM	557	CA	ALA A 382	18.576	52.724	124.604	1.00	40.77	C
ATOM	558	C	ALA A 382	17.128	52.295	124.647	1.00	41.16	C
ATOM	559	O	ALA A 382	16.307	52.896	125.364	1.00	41.74	O
ATOM	560	CB	ALA A 382	18.551	54.208	124.158	1.00	39.48	C
ATOM	561	N	TRP A 383	16.712	51.243	123.952	1.00	40.69	N
ATOM	562	CA	TRP A 383	15.292	50.882	123.935	1.00	39.18	C
ATOM	563	C	TRP A 383	14.642	50.806	125.292	1.00	38.59	C
ATOM	564	O	TRP A 383	13.687	51.543	125.573	1.00	37.35	O
ATOM	565	CB	TRP A 383	15.150	49.646	123.083	1.00	38.87	C
ATOM	566	CG	TRP A 383	15.591	48.367	123.697	1.00	38.06	C
ATOM	567	CD1	TRP A 383	16.809	47.778	123.640	1.00	37.73	C
ATOM	568	CD2	TRP A 383	14.746	47.501	124.465	1.00	37.97	C
ATOM	569	NE1	TRP A 383	16.788	46.590	124.331	1.00	37.21	N
ATOM	570	CE2	TRP A 383	15.537	46.405	124.849	1.00	37.91	C
ATOM	571	CE3	TRP A 383	13.407	47.566	124.859	1.00	38.26	C
ATOM	572	CZ2	TRP A 383	15.018	45.371	125.622	1.00	38.84	C
ATOM	573	CZ3	TRP A 383	12.902	46.537	125.625	1.00	38.87	C
ATOM	574	CH2	TRP A 383	13.700	45.447	126.002	1.00	39.04	C
ATOM	575	N	LEU A 384	15.177	49.938	126.160	1.00	38.08	N
ATOM	576	CA	LEU A 384	14.611	49.807	127.505	1.00	36.09	C
ATOM	577	C	LEU A 384	14.721	51.083	128.318	1.00	35.10	C
ATOM	578	O	LEU A 384	13.826	51.348	129.112	1.00	34.48	O
ATOM	579	CB	LEU A 384	15.207	48.608	128.203	1.00	34.99	C
ATOM	580	CG	LEU A 384	14.603	48.237	129.546	1.00	35.42	C
ATOM	581	CD1	LEU A 384	13.092	48.090	129.521	1.00	35.66	C
ATOM	582	CD2	LEU A 384	15.192	46.892	129.981	1.00	36.23	C
ATOM	583	N	GLU A 385	15.757	51.891	128.156	1.00	35.48	N
ATOM	584	CA	GLU A 385	15.848	53.129	128.939	1.00	36.88	C
ATOM	585	C	GLU A 385	14.644	53.984	128.520	1.00	36.73	C
ATOM	586	O	GLU A 385	13.861	54.383	129.411	1.00	35.40	O
ATOM	587	CB	GLU A 385	17.181	53.836	128.798	1.00	38.31	C
ATOM	588	CG	GLU A 385	18.326	53.543	129.749	1.00	38.88	C
ATOM	589	CD	GLU A 385	19.606	54.258	129.323	1.00	40.96	C
ATOM	590	OE1	GLU A 385	20.219	53.786	128.322	1.00	40.13	O
ATOM	591	OE2	GLU A 385	20.062	55.285	129.931	1.00	42.21	O
ATOM	592	N	ILE A 386	14.496	54.204	127.200	1.00	36.32	N
ATOM	593	CA	ILE A 386	13.369	54.952	126.667	1.00	36.91	C
ATOM	594	C	ILE A 386	12.015	54.392	127.175	1.00	37.34	C
ATOM	595	O	ILE A 386	11.196	55.155	127.686	1.00	36.16	O
ATOM	596	CB	ILE A 386	13.197	54.938	125.148	1.00	37.89	C
ATOM	597	CG1	ILE A 386	14.449	55.123	124.299	1.00	39.71	C
ATOM	598	CG2	ILE A 386	12.193	56.015	124.799	1.00	37.70	C

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ATOM	599	CD1 ILE A 386	15.189	56.418	124.439	1.00	40.45	C
ATOM	600	N LEU A 387	11.763	53.082	127.072	1.00	37.39	N
ATOM	601	CA LEU A 387	10.544	52.515	127.573	1.00	37.91	C
ATOM	602	C LEU A 387	10.387	52.805	129.064	1.00	39.68	C
ATOM	603	O LEU A 387	9.240	53.071	129.463	1.00	41.71	O
ATOM	604	CB LEU A 387	10.494	50.992	127.494	1.00	38.33	C
ATOM	605	CG LEU A 387	10.120	50.317	126.176	1.00	38.87	C
ATOM	606	CD1 LEU A 387	10.162	48.800	126.371	1.00	37.89	C
ATOM	607	CD2 LEU A 387	8.789	50.804	125.606	1.00	37.40	C
ATOM	608	N MET A 388	11.476	52.739	129.858	1.00	39.41	N
ATOM	609	CA MET A 388	11.300	52.973	131.289	1.00	38.29	C
ATOM	610	C MET A 388	11.054	54.431	131.585	1.00	38.40	C
ATOM	611	O MET A 388	10.187	54.682	132.426	1.00	37.90	O
ATOM	612	CB MET A 388	12.409	52.456	132.178	1.00	38.21	C
ATOM	613	CG MET A 388	12.865	51.030	131.946	1.00	39.18	C
ATOM	614	SD MET A 388	13.843	50.384	133.298	1.00	41.37	S
ATOM	615	CE MET A 388	13.780	48.630	133.153	1.00	40.82	C
ATOM	616	N ILE A 389	11.731	55.378	130.921	1.00	39.23	N
ATOM	617	CA ILE A 389	11.393	56.773	131.338	1.00	40.38	C
ATOM	618	C ILE A 389	9.953	57.105	130.980	1.00	41.61	C
ATOM	619	O ILE A 389	9.260	57.885	131.621	1.00	42.10	O
ATOM	620	CB ILE A 389	12.414	57.774	130.800	1.00	39.04	C
ATOM	621	CG1 ILE A 389	12.194	59.163	131.402	1.00	38.47	C
ATOM	622	CG2 ILE A 389	12.297	57.806	129.290	1.00	38.80	C
ATOM	623	CD1 ILE A 389	13.371	60.102	131.204	1.00	37.35	C
ATOM	624	N GLY A 390	9.417	56.498	129.930	1.00	42.82	N
ATOM	625	CA GLY A 390	8.039	56.715	129.508	1.00	44.08	C
ATOM	626	C GLY A 390	7.109	56.228	130.618	1.00	44.05	C
ATOM	627	O GLY A 390	6.226	56.959	131.077	1.00	44.56	O
ATOM	628	N LEU A 391	7.356	54.992	131.035	1.00	42.62	N
ATOM	629	CA LEU A 391	6.511	54.453	132.100	1.00	42.62	C
ATOM	630	C LEU A 391	6.512	55.359	133.320	1.00	42.98	C
ATOM	631	O LEU A 391	5.509	55.728	133.901	1.00	43.15	O
ATOM	632	CB LEU A 391	7.071	53.088	132.498	1.00	42.08	C
ATOM	633	CG LEU A 391	6.485	52.463	133.747	1.00	42.23	C
ATOM	634	CD1 LEU A 391	4.983	52.285	133.530	1.00	43.26	C
ATOM	635	CD2 LEU A 391	7.126	51.127	134.055	1.00	42.49	C
ATOM	636	N VAL A 392	7.704	55.731	133.759	1.00	43.68	N
ATOM	637	CA VAL A 392	7.917	56.545	134.931	1.00	43.90	C
ATOM	638	C VAL A 392	7.100	57.813	134.814	1.00	44.98	C
ATOM	639	O VAL A 392	6.380	58.241	135.708	1.00	45.64	O
ATOM	640	CB VAL A 392	9.422	56.833	135.146	1.00	42.28	C
ATOM	641	CG1 VAL A 392	9.675	57.920	136.172	1.00	42.44	C
ATOM	642	CG2 VAL A 392	10.088	55.603	135.729	1.00	42.06	C
ATOM	643	N TRP A 393	7.242	58.436	133.664	1.00	46.50	N

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ATOM	644	CA	TRP A 393	6.584	59.706	133.374	1.00	48.60	C
ATOM	645	C	TRP A 393	5.073	59.618	133.392	1.00	49.25	C
ATOM	646	O	TRP A 393	4.442	60.477	133.999	1.00	51.00	O
ATOM	647	CB	TRP A 393	7.008	60.174	131.992	1.00	48.98	C
ATOM	648	CG	TRP A 393	6.086	61.190	131.410	1.00	49.25	C
ATOM	649	CD1	TRP A 393	5.226	61.001	130.378	1.00	49.40	C
ATOM	650	CD2	TRP A 393	5.922	62.542	131.826	1.00	49.62	C
ATOM	651	NE1	TRP A 393	4.555	62.170	130.112	1.00	49.05	N
ATOM	652	CE2	TRP A 393	4.964	63.130	130.982	1.00	48.79	C
ATOM	653	CE3	TRP A 393	6.510	63.321	132.824	1.00	50.99	C
ATOM	654	CZ2	TRP A 393	4.580	64.458	131.090	1.00	48.79	C
ATOM	655	CZ3	TRP A 393	6.109	64.656	132.937	1.00	51.01	C
ATOM	656	CH2	TRP A 393	5.160	65.207	132.070	1.00	49.61	C
ATOM	657	N	ARG A 394	4.524	58.609	132.717	1.00	49.10	N
ATOM	658	CA	ARG A 394	3.079	58.463	132.729	1.00	48.80	C
ATOM	659	C	ARG A 394	2.639	57.914	134.078	1.00	50.57	C
ATOM	660	O	ARG A 394	1.430	57.901	134.332	1.00	53.43	O
ATOM	661	CB	ARG A 394	2.483	57.616	131.634	1.00	47.23	C
ATOM	662	CG	ARG A 394	3.134	56.353	131.161	1.00	46.71	C
ATOM	663	CD	ARG A 394	2.386	55.724	129.994	1.00	45.21	C
ATOM	664	NE	ARG A 394	2.758	54.304	129.908	1.00	45.92	N
ATOM	665	CZ	ARG A 394	3.880	53.877	129.315	1.00	45.48	C
ATOM	666	NH1	ARG A 394	4.639	54.850	128.808	1.00	45.47	N
ATOM	667	NH2	ARG A 394	4.192	52.585	129.253	1.00	43.51	N
ATOM	668	N	SER A 395	3.506	57.457	134.959	1.00	51.48	N
ATOM	669	CA	SER A 395	3.096	56.916	136.243	1.00	52.31	C
ATOM	670	C	SER A 395	3.171	57.963	137.341	1.00	54.06	C
ATOM	671	O	SER A 395	2.853	57.650	138.486	1.00	53.58	O
ATOM	672	CB	SER A 395	4.040	55.768	136.634	1.00	51.22	C
ATOM	673	OG	SER A 395	3.659	54.564	136.024	1.00	49.71	O
ATOM	674	N	MET A 396	3.621	59.161	136.995	1.00	56.81	N
ATOM	675	CA	MET A 396	3.791	60.223	137.959	1.00	60.16	C
ATOM	676	C	MET A 396	2.654	60.519	138.925	1.00	63.28	C
ATOM	677	O	MET A 396	2.823	60.538	140.153	1.00	63.48	O
ATOM	678	CB	MET A 396	4.030	61.519	137.188	1.00	59.66	C
ATOM	679	CG	MET A 396	5.202	62.300	137.761	1.00	60.46	C
ATOM	680	SD	MET A 396	5.832	63.284	136.390	1.00	63.79	S
ATOM	681	CE	MET A 396	5.681	64.939	137.052	1.00	63.38	C
ATOM	682	N	GLU A 397	1.464	60.775	138.386	1.00	66.02	N
ATOM	683	CA	GLU A 397	0.324	61.111	139.209	1.00	69.12	C
ATOM	684	C	GLU A 397	-0.378	59.904	139.747	1.00	67.67	C
ATOM	685	O	GLU A 397	-1.597	59.964	139.945	1.00	68.94	O
ATOM	686	CB	GLU A 397	-0.737	61.932	138.471	1.00	74.43	C
ATOM	687	CG	GLU A 397	-0.192	63.107	137.671	1.00	80.96	C
ATOM	688	CD	GLU A 397	0.439	62.557	136.400	1.00	85.44	C

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ATOM	689	OE1 GLU A 397	0.066	61.400	136.046	1.00	87.27	O
ATOM	690	OE2 GLU A 397	1.293	63.251	135.796	1.00	88.68	O
ATOM	691	N HIS A 398	0.215	58.755	139.964	1.00	65.64	N
ATOM	692	CA HIS A 398	-0.448	57.589	140.514	1.00	64.64	C
ATOM	693	C HIS A 398	0.563	57.044	141.525	1.00	63.33	C
ATOM	694	O HIS A 398	1.182	56.010	141.286	1.00	64.30	O
ATOM	695	CB HIS A 398	-0.808	56.503	139.512	1.00	65.95	C
ATOM	696	CG HIS A 398	-1.800	56.931	138.480	1.00	67.89	C
ATOM	697	ND1 HIS A 398	-1.581	58.093	137.754	1.00	68.76	N
ATOM	698	CD2 HIS A 398	-2.970	56.441	138.015	1.00	68.33	C
ATOM	699	CE1 HIS A 398	-2.553	58.322	136.904	1.00	68.97	C
ATOM	700	NE2 HIS A 398	-3.408	57.317	137.047	1.00	69.03	N
ATOM	701	N PRO A 399	0.738	57.788	142.593	1.00	60.98	N
ATOM	702	CA PRO A 399	1.678	57.460	143.639	1.00	60.04	C
ATOM	703	C PRO A 399	1.573	56.008	144.013	1.00	58.72	C
ATOM	704	O PRO A 399	0.479	55.479	144.144	1.00	60.15	O
ATOM	705	CB PRO A 399	1.307	58.333	144.857	1.00	60.42	C
ATOM	706	CG PRO A 399	0.722	59.525	144.140	1.00	60.58	C
ATOM	707	CD PRO A 399	0.029	59.010	142.914	1.00	60.38	C
ATOM	708	N GLY A 400	2.676	55.323	144.127	1.00	57.37	N
ATOM	709	CA GLY A 400	2.658	53.933	144.519	1.00	57.37	C
ATOM	710	C GLY A 400	2.241	52.954	143.467	1.00	56.93	C
ATOM	711	O GLY A 400	2.226	51.744	143.762	1.00	57.91	O
ATOM	712	N LYS A 401	1.931	53.447	142.279	1.00	56.53	N
ATOM	713	CA LYS A 401	1.508	52.589	141.185	1.00	56.36	C
ATOM	714	C LYS A 401	2.264	52.906	139.886	1.00	54.56	C
ATOM	715	O LYS A 401	2.864	53.977	139.700	1.00	53.14	O
ATOM	716	CB LYS A 401	0.041	52.772	140.841	1.00	58.66	C
ATOM	717	CG LYS A 401	-0.982	52.903	141.935	1.00	61.77	C
ATOM	718	CD LYS A 401	-1.890	51.680	141.909	1.00	65.18	C
ATOM	719	CE LYS A 401	-2.620	51.475	143.237	1.00	66.98	C
ATOM	720	NZ LYS A 401	-3.156	52.790	143.712	1.00	69.54	N
ATOM	721	N LEU A 402	2.172	51.896	139.007	1.00	51.98	N
ATOM	722	CA LEU A 402	2.813	52.052	137.708	1.00	50.19	C
ATOM	723	C LEU A 402	1.734	51.837	136.656	1.00	49.79	C
ATOM	724	O LEU A 402	1.148	50.766	136.579	1.00	50.90	O
ATOM	725	CB LEU A 402	3.972	51.108	137.434	1.00	49.03	C
ATOM	726	CG LEU A 402	5.170	51.118	138.369	1.00	48.58	C
ATOM	727	CD1 LEU A 402	5.995	49.842	138.211	1.00	49.67	C
ATOM	728	CD2 LEU A 402	6.035	52.333	138.144	1.00	46.96	C
ATOM	729	N LEU A 403	1.485	52.844	135.859	1.00	48.94	N
ATOM	730	CA LEU A 403	0.560	52.836	134.755	1.00	48.00	C
ATOM	731	C LEU A 403	1.171	52.346	133.445	1.00	48.26	C
ATOM	732	O LEU A 403	1.502	53.141	132.540	1.00	46.38	O
ATOM	733	CB LEU A 403	0.157	54.309	134.499	1.00	49.14	C

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ATOM	734	CG LEU A 403	-1.143	54.414	133.705	1.00	50.00	C
ATOM	735	CD1 LEU A 403	-2.347	54.243	134.616	1.00	51.26	C
ATOM	736	CD2 LEU A 403	-1.218	55.729	132.979	1.00	50.69	C
ATOM	737	N PHE A 404	1.320	51.014	133.299	1.00	48.71	N
ATOM	738	CA PHE A 404	1.867	50.495	132.036	1.00	49.09	C
ATOM	739	C PHE A 404	1.035	51.013	130.872	1.00	49.94	C
ATOM	740	O PHE A 404	1.593	51.449	129.875	1.00	50.84	O
ATOM	741	CB PHE A 404	1.939	48.961	131.983	1.00	48.34	C
ATOM	742	CG PHE A 404	3.113	48.547	132.829	1.00	48.44	C
ATOM	743	CD1 PHE A 404	2.917	48.338	134.176	1.00	49.16	C
ATOM	744	CD2 PHE A 404	4.381	48.409	132.309	1.00	48.46	C
ATOM	745	CE1 PHE A 404	3.989	47.974	134.994	1.00	48.97	C
ATOM	746	CE2 PHE A 404	5.438	48.054	133.130	1.00	48.15	C
ATOM	747	CZ PHE A 404	5.245	47.831	134.468	1.00	47.67	C
ATOM	748	N ALA A 405	-0.277	50.939	131.000	1.00	51.36	N
ATOM	749	CA ALA A 405	-1.254	51.416	130.046	1.00	52.93	C
ATOM	750	C ALA A 405	-2.365	52.175	130.749	1.00	54.33	C
ATOM	751	O ALA A 405	-2.547	52.092	131.967	1.00	56.08	O
ATOM	752	CB ALA A 405	-1.856	50.215	129.350	1.00	53.05	C
ATOM	753	N PRO A 406	-3.219	52.850	129.995	1.00	54.64	N
ATOM	754	CA PRO A 406	-4.366	53.602	130.483	1.00	54.88	C
ATOM	755	C PRO A 406	-5.275	52.556	131.109	1.00	55.66	C
ATOM	756	O PRO A 406	-5.948	52.873	132.087	1.00	58.90	O
ATOM	757	CB PRO A 406	-5.037	54.376	129.367	1.00	53.81	C
ATOM	758	CG PRO A 406	-4.033	54.176	128.275	1.00	54.41	C
ATOM	759	CD PRO A 406	-3.182	52.956	128.551	1.00	54.81	C
ATOM	760	N ASN A 407	-5.250	51.347	130.590	1.00	54.42	N
ATOM	761	CA ASN A 407	-6.030	50.281	131.148	1.00	54.72	C
ATOM	762	C ASN A 407	-5.158	49.201	131.762	1.00	55.68	C
ATOM	763	O ASN A 407	-5.566	48.020	131.772	1.00	56.97	O
ATOM	764	CB ASN A 407	-6.924	49.703	130.059	1.00	55.56	C
ATOM	765	CG ASN A 407	-6.093	48.843	129.120	1.00	55.68	C
ATOM	766	OD1 ASN A 407	-4.958	49.154	128.814	1.00	56.47	O
ATOM	767	ND2 ASN A 407	-6.631	47.739	128.670	1.00	56.02	N
ATOM	768	N LEU A 408	-3.970	49.522	132.274	1.00	55.43	N
ATOM	769	CA LEU A 408	-3.196	48.472	132.980	1.00	54.67	C
ATOM	770	C LEU A 408	-2.441	49.270	134.032	1.00	54.84	C
ATOM	771	O LEU A 408	-1.520	49.964	133.660	1.00	54.42	O
ATOM	772	CB LEU A 408	-2.282	47.623	132.172	1.00	55.04	C
ATOM	773	CG LEU A 408	-1.389	46.584	132.848	1.00	54.56	C
ATOM	774	CD1 LEU A 408	-2.143	45.735	133.845	1.00	53.43	C
ATOM	775	CD2 LEU A 408	-0.746	45.703	131.772	1.00	54.04	C
ATOM	776	N LEU A 409	-2.920	49.190	135.268	1.00	55.99	N
ATOM	777	CA LEU A 409	-2.287	49.971	136.344	1.00	55.11	C
ATOM	778	C LEU A 409	-1.816	49.041	137.434	1.00	55.12	C

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ATOM	779	O	LEU A 409	-2.616	48.795	138.321	1.00	57.05	O
ATOM	780	CB	LEU A 409	-3.328	50.959	136.781	1.00	54.28	C
ATOM	781	CG	LEU A 409	-3.147	51.968	137.874	1.00	55.28	C
ATOM	782	CD1	LEU A 409	-1.724	52.458	138.053	1.00	56.18	C
ATOM	783	CD2	LEU A 409	-3.999	53.209	137.569	1.00	55.71	C
ATOM	784	N	LEU A 410	-0.608	48.499	137.370	1.00	55.36	N
ATOM	785	CA	LEU A 410	-0.172	47.598	138.422	1.00	56.40	C
ATOM	786	C	LEU A 410	0.221	48.429	139.634	1.00	58.86	C
ATOM	787	O	LEU A 410	0.460	49.643	139.561	1.00	59.46	O
ATOM	788	CB	LEU A 410	0.933	46.656	137.991	1.00	54.82	C
ATOM	789	CG	LEU A 410	0.558	45.942	136.687	1.00	54.21	C
ATOM	790	CD1	LEU A 410	1.681	45.031	136.207	1.00	54.45	C
ATOM	791	CD2	LEU A 410	-0.733	45.192	136.922	1.00	53.26	C
ATOM	792	N	ASP A 411	0.223	47.704	140.730	1.00	60.91	N
ATOM	793	CA	ASP A 411	0.543	48.300	142.026	1.00	64.05	C
ATOM	794	C	ASP A 411	1.813	47.646	142.525	1.00	63.96	C
ATOM	795	O	ASP A 411	2.061	46.481	142.172	1.00	63.71	O
ATOM	796	CB	ASP A 411	-0.721	48.022	142.835	1.00	68.11	C
ATOM	797	CG	ASP A 411	-0.415	47.770	144.298	1.00	71.79	C
ATOM	798	OD1	ASP A 411	0.217	46.705	144.523	1.00	73.88	O
ATOM	799	OD2	ASP A 411	-0.793	48.646	145.116	1.00	73.30	O
ATOM	800	N	ARG A 412	2.612	48.326	143.354	1.00	64.12	N
ATOM	801	CA	ARG A 412	3.862	47.709	143.787	1.00	64.43	C
ATOM	802	C	ARG A 412	3.761	46.216	144.061	1.00	65.36	C
ATOM	803	O	ARG A 412	4.413	45.368	143.449	1.00	65.53	O
ATOM	804	CB	ARG A 412	4.473	48.394	144.996	1.00	63.99	C
ATOM	805	CG	ARG A 412	5.476	47.466	145.681	1.00	64.51	C
ATOM	806	CD	ARG A 412	6.364	48.216	146.642	1.00	65.90	C
ATOM	807	NE	ARG A 412	7.612	47.514	146.947	1.00	66.08	N
ATOM	808	CZ	ARG A 412	7.631	46.359	147.595	1.00	66.60	C
ATOM	809	NH1	ARG A 412	6.489	45.798	147.977	1.00	66.50	N
ATOM	810	NH2	ARG A 412	8.794	45.782	147.852	1.00	67.25	N
ATOM	811	N	ASN A 413	2.936	45.816	145.001	1.00	66.84	N
ATOM	812	CA	ASN A 413	2.798	44.419	145.363	1.00	69.21	C
ATOM	813	C	ASN A 413	2.524	43.498	144.218	1.00	69.03	C
ATOM	814	O	ASN A 413	2.983	42.348	144.280	1.00	69.61	O
ATOM	815	CB	ASN A 413	1.703	44.331	146.438	1.00	73.12	C
ATOM	816	CG	ASN A 413	2.124	45.327	147.524	1.00	76.06	C
ATOM	817	OD1	ASN A 413	3.078	44.994	148.239	1.00	77.88	O
ATOM	818	ND2	ASN A 413	1.452	46.472	147.569	1.00	76.66	N
ATOM	819	N	GLN A 414	1.883	43.910	143.128	1.00	68.31	N
ATOM	820	CA	GLN A 414	1.642	43.008	141.997	1.00	67.98	C
ATOM	821	C	GLN A 414	2.953	42.619	141.323	1.00	67.67	C
ATOM	822	O	GLN A 414	3.059	41.664	140.555	1.00	67.18	O
ATOM	823	CB	GLN A 414	0.647	43.591	141.021	1.00	68.30	C

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ATOM	824	CG	GLN A 414	-0.480	44.330	141.728	1.00	69.60	C
ATOM	825	CD	GLN A 414	-1.665	44.497	140.796	1.00	70.79	C
ATOM	826	OE1	GLN A 414	-2.137	45.612	140.531	1.00	71.71	O
ATOM	827	NE2	GLN A 414	-2.113	43.340	140.316	1.00	71.30	N
ATOM	828	N	GLY A 415	4.000	43.367	141.647	1.00	67.56	N
ATOM	829	CA	GLY A 415	5.337	43.090	141.185	1.00	68.40	C
ATOM	830	C	GLY A 415	5.692	41.723	141.760	1.00	68.78	C
ATOM	831	O	GLY A 415	6.219	40.895	140.999	1.00	70.15	O
ATOM	832	N	LYS A 416	5.390	41.382	143.003	1.00	68.94	N
ATOM	833	CA	LYS A 416	5.725	40.072	143.555	1.00	69.71	C
ATOM	834	C	LYS A 416	5.240	38.893	142.725	1.00	68.42	C
ATOM	835	O	LYS A 416	5.737	37.775	142.904	1.00	68.37	O
ATOM	836	CB	LYS A 416	5.217	39.903	144.989	1.00	71.98	C
ATOM	837	CG	LYS A 416	5.289	41.187	145.797	1.00	75.34	C
ATOM	838	CD	LYS A 416	5.972	40.921	147.124	1.00	78.85	C
ATOM	839	CE	LYS A 416	5.037	41.194	148.298	1.00	80.94	C
ATOM	840	NZ	LYS A 416	5.028	42.657	148.646	1.00	82.73	N
ATOM	841	N	CYS A 417	4.305	39.052	141.813	1.00	66.86	N
ATOM	842	CA	CYS A 417	3.860	37.971	140.977	1.00	67.43	C
ATOM	843	C	CYS A 417	5.026	37.413	140.191	1.00	66.11	C
ATOM	844	O	CYS A 417	5.126	36.175	140.099	1.00	67.52	O
ATOM	845	CB	CYS A 417	2.713	38.442	140.083	1.00	70.09	C
ATOM	846	SG	CYS A 417	1.273	38.889	141.112	1.00	76.69	S
ATOM	847	N	VAL A 418	5.905	38.234	139.626	1.00	63.63	N
ATOM	848	CA	VAL A 418	7.035	37.708	138.871	1.00	61.74	C
ATOM	849	C	VAL A 418	8.305	37.717	139.709	1.00	61.71	C
ATOM	850	O	VAL A 418	8.526	38.675	140.440	1.00	61.44	O
ATOM	851	CB	VAL A 418	7.243	38.471	137.563	1.00	61.05	C
ATOM	852	CG1	VAL A 418	8.470	37.998	136.789	1.00	60.27	C
ATOM	853	CG2	VAL A 418	6.007	38.321	136.687	1.00	60.89	C
ATOM	854	N	GLU A 419	9.106	36.675	139.612	1.00	62.68	N
ATOM	855	CA	GLU A 419	10.364	36.560	140.315	1.00	65.75	C
ATOM	856	C	GLU A 419	11.286	37.737	140.053	1.00	65.20	C
ATOM	857	O	GLU A 419	11.435	38.260	138.939	1.00	65.89	O
ATOM	858	CB	GLU A 419	11.016	35.280	139.815	1.00	70.42	C
ATOM	859	CG	GLU A 419	11.724	34.445	140.867	1.00	77.38	C
ATOM	860	CD	GLU A 419	12.707	33.458	140.236	1.00	82.40	C
ATOM	861	OE1	GLU A 419	12.450	32.940	139.101	1.00	84.85	O
ATOM	862	OE2	GLU A 419	13.778	33.174	140.851	1.00	84.52	O
ATOM	863	N	GLY A 420	11.927	38.291	141.064	1.00	64.33	N
ATOM	864	CA	GLY A 420	12.825	39.411	140.952	1.00	63.57	C
ATOM	865	C	GLY A 420	12.319	40.718	140.412	1.00	62.90	C
ATOM	866	O	GLY A 420	13.138	41.624	140.218	1.00	63.49	O
ATOM	867	N	MET A 421	11.046	40.924	140.173	1.00	62.63	N
ATOM	868	CA	MET A 421	10.463	42.130	139.646	1.00	62.05	C

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ATOM	869	C	MET A 421	10.198	43.267	140.603	1.00	60.86	C
ATOM	870	O	MET A 421	10.126	44.429	140.222	1.00	61.61	O
ATOM	871	CB	MET A 421	9.053	41.763	139.110	1.00	63.01	C
ATOM	872	CG	MET A 421	9.155	41.484	137.618	1.00	64.57	C
ATOM	873	SD	MET A 421	8.600	42.941	136.721	1.00	65.96	S
ATOM	874	CE	MET A 421	6.843	42.583	136.658	1.00	65.26	C
ATOM	875	N	VAL A 422	9.991	42.978	141.865	1.00	59.84	N
ATOM	876	CA	VAL A 422	9.671	43.990	142.842	1.00	59.34	C
ATOM	877	C	VAL A 422	10.763	45.031	142.941	1.00	58.27	C
ATOM	878	O	VAL A 422	10.400	46.177	143.150	1.00	58.27	O
ATOM	879	CB	VAL A 422	9.513	43.477	144.290	1.00	60.52	C
ATOM	880	CG1	VAL A 422	8.283	44.098	144.911	1.00	59.97	C
ATOM	881	CG2	VAL A 422	9.511	41.954	144.331	1.00	62.39	C
ATOM	882	N	GLU A 423	12.014	44.624	142.845	1.00	57.88	N
ATOM	883	CA	GLU A 423	13.093	45.582	143.002	1.00	58.53	C
ATOM	884	C	GLU A 423	13.054	46.565	141.842	1.00	56.03	C
ATOM	885	O	GLU A 423	13.268	47.771	142.015	1.00	56.14	O
ATOM	886	CB	GLU A 423	14.465	44.939	143.057	1.00	63.31	C
ATOM	887	CG	GLU A 423	14.635	43.901	144.141	1.00	69.88	C
ATOM	888	CD	GLU A 423	14.211	42.522	143.622	1.00	74.05	C
ATOM	889	OE1	GLU A 423	12.986	42.214	143.553	1.00	74.81	O
ATOM	890	OE2	GLU A 423	15.172	41.762	143.287	1.00	76.76	O
ATOM	891	N	ILE A 424	12.801	45.987	140.672	1.00	52.17	N
ATOM	892	CA	ILE A 424	12.714	46.851	139.483	1.00	49.13	C
ATOM	893	C	ILE A 424	11.538	47.787	139.678	1.00	48.36	C
ATOM	894	O	ILE A 424	11.673	49.013	139.527	1.00	48.89	O
ATOM	895	CB	ILE A 424	12.648	45.948	138.262	1.00	48.08	C
ATOM	896	CG1	ILE A 424	13.983	45.195	138.186	1.00	47.42	C
ATOM	897	CG2	ILE A 424	12.405	46.751	137.013	1.00	48.16	C
ATOM	898	CD1	ILE A 424	13.943	44.144	137.105	1.00	47.58	C
ATOM	899	N	PHE A 425	10.384	47.274	140.097	1.00	46.94	N
ATOM	900	CA	PHE A 425	9.231	48.116	140.345	1.00	47.55	C
ATOM	901	C	PHE A 425	9.587	49.199	141.354	1.00	49.35	C
ATOM	902	O	PHE A 425	9.195	50.366	141.213	1.00	49.71	O
ATOM	903	CB	PHE A 425	8.081	47.277	140.882	1.00	47.68	C
ATOM	904	CG	PHE A 425	7.176	46.715	139.829	1.00	48.82	C
ATOM	905	CD1	PHE A 425	7.680	46.377	138.573	1.00	49.52	C
ATOM	906	CD2	PHE A 425	5.825	46.514	140.070	1.00	48.28	C
ATOM	907	CE1	PHE A 425	6.899	45.863	137.561	1.00	48.30	C
ATOM	908	CE2	PHE A 425	5.038	45.994	139.058	1.00	49.20	C
ATOM	909	CZ	PHE A 425	5.557	45.670	137.808	1.00	48.67	C
ATOM	910	N	ASP A 426	10.341	48.806	142.386	1.00	50.36	N
ATOM	911	CA	ASP A 426	10.737	49.750	143.426	1.00	50.81	C
ATOM	912	C	ASP A 426	11.527	50.902	142.852	1.00	50.50	C
ATOM	913	O	ASP A 426	11.176	52.085	143.041	1.00	49.63	O

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ATOM	914	CB	ASP A 426	11.406	48.954	144.534	1.00	53.65	C
ATOM	915	CG	ASP A 426	10.316	48.430	145.473	1.00	56.55	C
ATOM	916	OD1	ASP A 426	9.170	48.940	145.384	1.00	57.43	O
ATOM	917	OD2	ASP A 426	10.590	47.529	146.301	1.00	58.16	O
ATOM	918	N	MET A 427	12.575	50.575	142.083	1.00	49.66	N
ATOM	919	CA	MET A 427	13.396	51.606	141.438	1.00	47.62	C
ATOM	920	C	MET A 427	12.538	52.483	140.529	1.00	46.03	C
ATOM	921	O	MET A 427	12.679	53.726	140.504	1.00	44.60	O
ATOM	922	CB	MET A 427	14.476	50.885	140.655	1.00	48.02	C
ATOM	923	CG	MET A 427	15.467	50.239	141.617	1.00	49.42	C
ATOM	924	SD	MET A 427	16.870	49.639	140.649	1.00	51.75	S
ATOM	925	CE	MET A 427	16.149	48.109	140.031	1.00	50.74	C
ATOM	926	N	LEU A 428	11.627	51.786	139.817	1.00	43.62	N
ATOM	927	CA	LEU A 428	10.719	52.557	138.954	1.00	43.05	C
ATOM	928	C	LEU A 428	9.879	53.529	139.779	1.00	43.69	C
ATOM	929	O	LEU A 428	9.804	54.738	139.487	1.00	43.73	O
ATOM	930	CB	LEU A 428	9.884	51.598	138.134	1.00	41.42	C
ATOM	931	CG	LEU A 428	10.630	50.884	137.008	1.00	39.99	C
ATOM	932	CD1	LEU A 428	9.754	49.788	136.444	1.00	39.57	C
ATOM	933	CD2	LEU A 428	11.004	51.865	135.920	1.00	40.09	C
ATOM	934	N	LEU A 429	9.262	53.032	140.866	1.00	43.31	N
ATOM	935	CA	LEU A 429	8.457	53.947	141.688	1.00	42.48	C
ATOM	936	C	LEU A 429	9.273	55.104	142.224	1.00	42.48	C
ATOM	937	O	LEU A 429	8.897	56.281	142.110	1.00	42.82	O
ATOM	938	CB	LEU A 429	7.725	53.158	142.761	1.00	41.76	C
ATOM	939	CG	LEU A 429	6.674	52.197	142.202	1.00	41.28	C
ATOM	940	CD1	LEU A 429	6.320	51.130	143.211	1.00	42.51	C
ATOM	941	CD2	LEU A 429	5.404	52.920	141.801	1.00	41.15	C
ATOM	942	N	ALA A 430	10.452	54.808	142.769	1.00	42.41	N
ATOM	943	CA	ALA A 430	11.304	55.886	143.268	1.00	42.66	C
ATOM	944	C	ALA A 430	11.554	56.960	142.217	1.00	43.57	C
ATOM	945	O	ALA A 430	11.573	58.158	142.539	1.00	44.26	O
ATOM	946	CB	ALA A 430	12.642	55.300	143.679	1.00	41.40	C
ATOM	947	N	THR A 431	11.794	56.562	140.959	1.00	43.33	N
ATOM	948	CA	THR A 431	12.075	57.589	139.956	1.00	44.07	C
ATOM	949	C	THR A 431	10.814	58.382	139.711	1.00	45.04	C
ATOM	950	O	THR A 431	10.793	59.607	139.615	1.00	45.47	O
ATOM	951	CB	THR A 431	12.460	56.942	138.612	1.00	45.00	C
ATOM	952	OG1	THR A 431	13.421	55.921	138.929	1.00	46.49	O
ATOM	953	CG2	THR A 431	12.973	57.967	137.624	1.00	43.41	C
ATOM	954	N	SER A 432	9.724	57.606	139.612	1.00	46.10	N
ATOM	955	CA	SER A 432	8.414	58.218	139.367	1.00	47.08	C
ATOM	956	C	SER A 432	8.124	59.288	140.409	1.00	46.69	C
ATOM	957	O	SER A 432	7.747	60.409	140.153	1.00	45.78	O
ATOM	958	CB	SER A 432	7.350	57.120	139.344	1.00	47.86	C

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ATOM	959	OG	SER A 432	6.123	57.835	139.167	1.00	50.60	O
ATOM	960	N	SER A 433	8.350	58.946	141.656	1.00	47.93	N
ATOM	961	CA	SER A 433	8.262	59.823	142.790	1.00	50.26	C
ATOM	962	C	SER A 433	9.182	61.036	142.700	1.00	51.77	C
ATOM	963	O	SER A 433	8.860	62.208	142.921	1.00	51.77	O
ATOM	964	CB	SER A 433	8.747	58.893	143.913	1.00	51.30	C
ATOM	965	OG	SER A 433	8.321	59.525	145.102	1.00	55.64	O
ATOM	966	N	ARG A 434	10.462	60.845	142.322	1.00	53.27	N
ATOM	967	CA	ARG A 434	11.385	61.964	142.206	1.00	53.96	C
ATOM	968	C	ARG A 434	10.833	62.901	141.138	1.00	54.44	C
ATOM	969	O	ARG A 434	10.920	64.120	141.310	1.00	53.93	O
ATOM	970	CB	ARG A 434	12.833	61.553	141.945	1.00	54.60	C
ATOM	971	CG	ARG A 434	13.744	62.743	141.651	1.00	56.54	C
ATOM	972	CD	ARG A 434	15.066	62.762	142.412	1.00	59.10	C
ATOM	973	NE	ARG A 434	15.761	64.075	142.300	1.00	60.44	N
ATOM	974	CZ	ARG A 434	15.316	65.088	143.057	1.00	62.10	C
ATOM	975	NH1	ARG A 434	14.279	64.853	143.875	1.00	63.73	N
ATOM	976	NH2	ARG A 434	15.804	66.318	143.075	1.00	62.51	N
ATOM	977	N	PHE A 435	10.273	62.342	140.053	1.00	55.61	N
ATOM	978	CA	PHE A 435	9.750	63.208	138.991	1.00	57.31	C
ATOM	979	C	PHE A 435	8.592	64.042	139.537	1.00	59.37	C
ATOM	980	O	PHE A 435	8.471	65.219	139.202	1.00	59.41	O
ATOM	981	CB	PHE A 435	9.334	62.444	137.746	1.00	56.63	C
ATOM	982	CG	PHE A 435	10.431	62.101	136.775	1.00	56.74	C
ATOM	983	CD1	PHE A 435	11.719	62.592	136.901	1.00	55.68	C
ATOM	984	CD2	PHE A 435	10.157	61.253	135.699	1.00	56.20	C
ATOM	985	CE1	PHE A 435	12.695	62.258	136.007	1.00	55.09	C
ATOM	986	CE2	PHE A 435	11.126	60.903	134.792	1.00	55.13	C
ATOM	987	CZ	PHE A 435	12.397	61.414	134.962	1.00	55.70	C
ATOM	988	N	ARG A 436	7.759	63.429	140.376	1.00	61.13	N
ATOM	989	CA	ARG A 436	6.641	64.113	140.985	1.00	63.11	C
ATOM	990	C	ARG A 436	7.197	65.242	141.845	1.00	64.45	C
ATOM	991	O	ARG A 436	6.816	66.399	141.738	1.00	64.90	O
ATOM	992	CB	ARG A 436	5.860	63.145	141.866	1.00	64.53	C
ATOM	993	CG	ARG A 436	4.401	63.479	142.051	1.00	66.60	C
ATOM	994	CD	ARG A 436	3.723	62.475	142.958	1.00	69.34	C
ATOM	995	NE	ARG A 436	3.807	61.082	142.518	1.00	71.54	N
ATOM	996	CZ	ARG A 436	4.389	60.109	143.224	1.00	72.66	C
ATOM	997	NH1	ARG A 436	4.939	60.419	144.399	1.00	72.98	N
ATOM	998	NH2	ARG A 436	4.428	58.850	142.770	1.00	72.97	N
ATOM	999	N	MET A 437	8.157	64.942	142.711	1.00	66.55	N
ATOM	1000	CA	MET A 437	8.708	65.953	143.586	1.00	69.37	C
ATOM	1001	C	MET A 437	9.295	67.133	142.836	1.00	68.28	C
ATOM	1002	O	MET A 437	9.152	68.261	143.317	1.00	69.47	O
ATOM	1003	CB	MET A 437	9.815	65.340	144.427	1.00	75.02	C

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ATOM 1004	CG MET A 437	9.372 64.432 145.574 1.00 81.18	C
ATOM 1005	SD MET A 437	10.694 64.376 146.836 1.00 88.82	S
ATOM 1006	CE MET A 437	12.102 63.703 145.882 1.00 86.33	C
ATOM 1007	N MET A 438	9.951 66.950 141.699 1.00 65.71	N
ATOM 1008	CA MET A 438	10.558 68.039 140.964 1.00 63.53	C
ATOM 1009	C MET A 438	9.567 68.718 140.041 1.00 62.93	C
ATOM 1010	O MET A 438	9.886 69.670 139.338 1.00 62.03	O
ATOM 1011	CB MET A 438	11.604 67.455 140.031 1.00 63.98	C
ATOM 1012	CG MET A 438	12.660 66.626 140.727 1.00 64.00	C
ATOM 1013	SD MET A 438	14.124 66.561 139.710 1.00 65.30	S
ATOM 1014	CE MET A 438	14.211 68.068 138.785 1.00 65.23	C
ATOM 1015	N ASN A 439	8.396 68.109 140.024 1.00 63.06	N
ATOM 1016	CA ASN A 439	7.328 68.614 139.185 1.00 64.69	C
ATOM 1017	C ASN A 439	7.852 68.799 137.774 1.00 62.61	C
ATOM 1018	O ASN A 439	7.941 69.878 137.215 1.00 62.49	O
ATOM 1019	CB ASN A 439	6.823 69.911 139.804 1.00 69.53	C
ATOM 1020	CG ASN A 439	5.621 70.392 139.004 1.00 74.26	C
ATOM 1021	OD1 ASN A 439	5.357 71.604 138.982 1.00 77.21	O
ATOM 1022	ND2 ASN A 439	4.926 69.462 138.333 1.00 76.08	N
ATOM 1023	N LEU A 440	8.230 67.665 137.205 1.00 60.80	N
ATOM 1024	CA LEU A 440	8.788 67.601 135.866 1.00 59.54	C
ATOM 1025	C LEU A 440	7.718 67.929 134.827 1.00 60.15	C
ATOM 1026	O LEU A 440	6.628 67.355 134.841 1.00 59.90	O
ATOM 1027	CB LEU A 440	9.367 66.212 135.632 1.00 57.90	C
ATOM 1028	CG LEU A 440	9.829 65.847 134.229 1.00 55.78	C
ATOM 1029	CD1 LEU A 440	11.091 66.630 133.935 1.00 55.63	C
ATOM 1030	CD2 LEU A 440	10.054 64.353 134.142 1.00 55.22	C
ATOM 1031	N GLN A 441	8.077 68.857 133.953 1.00 60.11	N
ATOM 1032	CA GLN A 441	7.191 69.285 132.897 1.00 61.04	C
ATOM 1033	C GLN A 441	7.253 68.392 131.687 1.00 60.27	C
ATOM 1034	O GLN A 441	8.288 67.783 131.441 1.00 61.92	O
ATOM 1035	CB GLN A 441	7.686 70.657 132.419 1.00 64.18	C
ATOM 1036	CG GLN A 441	7.574 71.751 133.471 1.00 67.75	C
ATOM 1037	CD GLN A 441	6.230 71.706 134.175 1.00 69.65	C
ATOM 1038	OE1 GLN A 441	5.223 72.088 133.564 1.00 71.52	O
ATOM 1039	NE2 GLN A 441	6.272 71.215 135.408 1.00 70.33	N
ATOM 1040	N GLY A 442	6.219 68.364 130.870 1.00 59.49	N
ATOM 1041	CA GLY A 442	6.235 67.547 129.661 1.00 57.69	C
ATOM 1042	C GLY A 442	7.292 68.028 128.687 1.00 56.85	C
ATOM 1043	O GLY A 442	7.893 67.204 128.001 1.00 56.37	O
ATOM 1044	N GLU A 443	7.562 69.324 128.581 1.00 57.11	N
ATOM 1045	CA GLU A 443	8.582 69.793 127.645 1.00 58.57	C
ATOM 1046	C GLU A 443	9.951 69.260 128.121 1.00 56.33	C
ATOM 1047	O GLU A 443	10.800 68.952 127.277 1.00 55.92	O
ATOM 1048	CB GLU A 443	8.725 71.287 127.427 1.00 61.99	C

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ATOM	1049	CG	GLU A 443	7.530	72.149	127.143	1.00	65.79	C
ATOM	1050	CD	GLU A 443	6.392	71.931	128.137	1.00	68.13	C
ATOM	1051	OE1	GLU A 443	6.621	71.911	129.369	1.00	68.25	O
ATOM	1052	OE2	GLU A 443	5.256	71.763	127.630	1.00	69.95	O
ATOM	1053	N	GLU A 444	10.101	69.205	129.445	1.00	53.20	N
ATOM	1054	CA	GLU A 444	11.331	68.677	130.012	1.00	51.24	C
ATOM	1055	C	GLU A 444	11.397	67.171	129.727	1.00	50.05	C
ATOM	1056	O	GLU A 444	12.444	66.683	129.258	1.00	50.87	O
ATOM	1057	CB	GLU A 444	11.372	68.890	131.514	1.00	50.94	C
ATOM	1058	CG	GLU A 444	11.608	70.359	131.856	1.00	51.30	C
ATOM	1059	CD	GLU A 444	11.499	70.564	133.365	1.00	51.90	C
ATOM	1060	OE1	GLU A 444	10.606	69.965	134.020	1.00	51.11	O
ATOM	1061	OE2	GLU A 444	12.349	71.353	133.839	1.00	52.20	O
ATOM	1062	N	PHE A 445	10.282	66.481	129.989	1.00	46.38	N
ATOM	1063	CA	PHE A 445	10.254	65.055	129.738	1.00	44.95	C
ATOM	1064	C	PHE A 445	10.728	64.714	128.336	1.00	45.48	C
ATOM	1065	O	PHE A 445	11.613	63.901	128.118	1.00	47.22	O
ATOM	1066	CB	PHE A 445	8.844	64.523	129.927	1.00	43.54	C
ATOM	1067	CG	PHE A 445	8.615	63.149	129.369	1.00	43.00	C
ATOM	1068	CD1	PHE A 445	9.314	62.082	129.885	1.00	43.66	C
ATOM	1069	CD2	PHE A 445	7.726	62.898	128.353	1.00	42.85	C
ATOM	1070	CE1	PHE A 445	9.132	60.799	129.421	1.00	44.24	C
ATOM	1071	CE2	PHE A 445	7.502	61.627	127.874	1.00	43.01	C
ATOM	1072	CZ	PHE A 445	8.207	60.574	128.415	1.00	44.06	C
ATOM	1073	N	VAL A 446	10.158	65.315	127.329	1.00	45.92	N
ATOM	1074	CA	VAL A 446	10.458	65.099	125.919	1.00	46.59	C
ATOM	1075	C	VAL A 446	11.915	65.347	125.625	1.00	48.14	C
ATOM	1076	O	VAL A 446	12.579	64.661	124.811	1.00	49.23	O
ATOM	1077	CB	VAL A 446	9.400	65.935	125.178	1.00	46.86	C
ATOM	1078	CG1	VAL A 446	9.928	66.958	124.216	1.00	46.55	C
ATOM	1079	CG2	VAL A 446	8.437	64.956	124.504	1.00	47.00	C
ATOM	1080	N	CYS A 447	12.545	66.323	126.279	1.00	48.23	N
ATOM	1081	CA	CYS A 447	13.965	66.562	126.046	1.00	48.88	C
ATOM	1082	C	CYS A 447	14.829	65.451	126.609	1.00	48.68	C
ATOM	1083	O	CYS A 447	15.747	64.958	125.966	1.00	49.55	O
ATOM	1084	CB	CYS A 447	14.346	67.868	126.761	1.00	50.37	C
ATOM	1085	SG	CYS A 447	13.962	69.266	125.693	1.00	54.72	S
ATOM	1086	N	LEU A 448	14.573	65.046	127.857	1.00	47.78	N
ATOM	1087	CA	LEU A 448	15.344	63.993	128.499	1.00	46.35	C
ATOM	1088	C	LEU A 448	15.277	62.710	127.679	1.00	46.10	C
ATOM	1089	O	LEU A 448	16.301	62.054	127.425	1.00	47.12	O
ATOM	1090	CB	LEU A 448	14.819	63.712	129.882	1.00	47.13	C
ATOM	1091	CG	LEU A 448	15.095	64.717	130.993	1.00	48.03	C
ATOM	1092	CD1	LEU A 448	14.343	64.280	132.252	1.00	48.59	C
ATOM	1093	CD2	LEU A 448	16.577	64.837	131.306	1.00	47.62	C

ATOM 1094 N LYS A 449	14.066 62.374 127.233 1.00 44.06	N
ATOM 1095 CA LYS A 449	13.920 61.177 126.410 1.00 43.80	C
ATOM 1096 C LYS A 449	14.845 61.244 125.207 1.00 44.40	C
ATOM 1097 O LYS A 449	15.550 60.268 124.897 1.00 44.81	O
ATOM 1098 CB LYS A 449	12.447 61.056 126.105 1.00 44.40	C
ATOM 1099 CG LYS A 449	12.005 59.609 125.919 1.00 45.76	C
ATOM 1100 CD LYS A 449	10.975 59.575 124.815 1.00 47.01	C
ATOM 1101 CE LYS A 449	9.566 59.913 125.290 1.00 46.65	C
ATOM 1102 NZ LYS A 449	8.695 59.596 124.116 1.00 48.86	N
ATOM 1103 N SER A 450	14.955 62.371 124.488 1.00 44.02	N
ATOM 1104 CA SER A 450	15.857 62.460 123.353 1.00 43.29	C
ATOM 1105 C SER A 450	17.290 62.404 123.826 1.00 42.60	C
ATOM 1106 O SER A 450	18.040 61.800 123.074 1.00 45.11	O
ATOM 1107 CB SER A 450	15.796 63.778 122.581 1.00 44.22	C
ATOM 1108 OG SER A 450	14.418 64.035 122.379 1.00 47.84	O
ATOM 1109 N ILE A 451	17.611 63.005 124.967 1.00 40.88	N
ATOM 1110 CA ILE A 451	19.001 62.920 125.432 1.00 40.01	C
ATOM 1111 C ILE A 451	19.358 61.442 125.585 1.00 39.10	C
ATOM 1112 O ILE A 451	20.399 61.008 125.107 1.00 37.56	O
ATOM 1113 CB ILE A 451	19.158 63.666 126.752 1.00 40.12	C
ATOM 1114 CG1 ILE A 451	18.909 65.145 126.419 1.00 40.56	C
ATOM 1115 CG2 ILE A 451	20.505 63.369 127.386 1.00 38.37	C
ATOM 1116 CD1 ILE A 451	19.254 66.049 127.599 1.00 43.13	C
ATOM 1117 N ILE A 452	18.436 60.691 126.208 1.00 38.88	N
ATOM 1118 CA ILE A 452	18.647 59.258 126.397 1.00 37.88	C
ATOM 1119 C ILE A 452	18.904 58.563 125.071 1.00 38.21	C
ATOM 1120 O ILE A 452	19.849 57.783 125.009 1.00 38.74	O
ATOM 1121 CB ILE A 452	17.473 58.561 127.115 1.00 36.36	C
ATOM 1122 CG1 ILE A 452	17.338 59.192 128.493 1.00 36.06	C
ATOM 1123 CG2 ILE A 452	17.719 57.058 127.205 1.00 35.54	C
ATOM 1124 CD1 ILE A 452	16.450 58.476 129.482 1.00 36.69	C
ATOM 1125 N LEU A 453	18.087 58.850 124.060 1.00 38.39	N
ATOM 1126 CA LEU A 453	18.270 58.202 122.779 1.00 39.25	C
ATOM 1127 C LEU A 453	19.642 58.512 122.217 1.00 40.74	C
ATOM 1128 O LEU A 453	20.292 57.622 121.698 1.00 41.89	O
ATOM 1129 CB LEU A 453	17.235 58.635 121.726 1.00 38.09	C
ATOM 1130 CG LEU A 453	17.495 58.133 120.289 1.00 35.95	C
ATOM 1131 CD1 LEU A 453	17.416 56.618 120.176 1.00 32.72	C
ATOM 1132 CD2 LEU A 453	16.515 58.769 119.313 1.00 35.28	C
ATOM 1133 N LEU A 454	20.085 59.748 122.287 1.00 42.99	N
ATOM 1134 CA LEU A 454	21.369 60.127 121.735 1.00 44.70	C
ATOM 1135 C LEU A 454	22.610 59.863 122.554 1.00 45.14	C
ATOM 1136 O LEU A 454	23.660 59.665 121.912 1.00 47.02	O
ATOM 1137 CB LEU A 454	21.379 61.655 121.422 1.00 44.28	C
ATOM 1138 CG LEU A 454	20.508 61.976 120.203 1.00 44.30	C

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ATOM	1139	CD1 LEU A 454	20.109	63.428	120.129	1.00	44.81	C
ATOM	1140	CD2 LEU A 454	21.318	61.594	118.982	1.00	45.23	C
ATOM	1141	N ASN A 455	22.533	59.909	123.869	1.00	45.07	N
ATOM	1142	CA ASN A 455	23.768	59.745	124.627	1.00	45.73	C
ATOM	1143	C ASN A 455	24.057	58.330	125.013	1.00	48.44	C
ATOM	1144	O ASN A 455	25.233	58.024	125.199	1.00	49.87	O
ATOM	1145	CB ASN A 455	23.746	60.663	125.831	1.00	44.63	C
ATOM	1146	CG ASN A 455	24.714	60.421	126.940	1.00	45.06	C
ATOM	1147	OD1 ASN A 455	24.312	59.878	127.981	1.00	46.01	O
ATOM	1148	ND2 ASN A 455	25.991	60.781	126.797	1.00	45.17	N
ATOM	1149	N SER A 456	23.085	57.454	125.143	1.00	51.91	N
ATOM	1150	CA SER A 456	23.403	56.111	125.615	1.00	54.70	C
ATOM	1151	C SER A 456	24.368	55.318	124.791	1.00	57.99	C
ATOM	1152	O SER A 456	25.335	54.734	125.316	1.00	60.18	O
ATOM	1153	CB SER A 456	22.100	55.365	125.871	1.00	54.27	C
ATOM	1154	OG SER A 456	21.657	55.684	127.170	1.00	53.76	O
ATOM	1155	N GLY A 457	24.209	55.221	123.492	1.00	60.97	N
ATOM	1156	CA GLY A 457	25.128	54.406	122.689	1.00	63.92	C
ATOM	1157	C GLY A 457	26.251	55.182	122.043	1.00	65.28	C
ATOM	1158	O GLY A 457	26.903	54.604	121.187	1.00	64.24	O
ATOM	1159	N VAL A 458	26.452	56.434	122.446	1.00	68.49	N
ATOM	1160	CA VAL A 458	27.515	57.233	121.845	1.00	71.65	C
ATOM	1161	C VAL A 458	28.920	56.730	122.068	1.00	75.14	C
ATOM	1162	O VAL A 458	29.697	56.796	121.100	1.00	75.96	O
ATOM	1163	CB VAL A 458	27.347	58.721	122.178	1.00	70.32	C
ATOM	1164	CG1 VAL A 458	27.735	59.077	123.578	1.00	69.38	C
ATOM	1165	CG2 VAL A 458	28.178	59.499	121.170	1.00	70.62	C
ATOM	1166	N TYR A 459	29.336	56.161	123.184	1.00	79.44	N
ATOM	1167	CA TYR A 459	30.674	55.650	123.410	1.00	84.10	C
ATOM	1168	C TYR A 459	30.891	54.266	122.826	1.00	86.75	C
ATOM	1169	O TYR A 459	31.823	53.568	123.250	1.00	88.20	O
ATOM	1170	CB TYR A 459	31.027	55.534	124.928	1.00	85.49	C
ATOM	1171	CG TYR A 459	30.785	56.916	125.494	1.00	88.05	C
ATOM	1172	CD1 TYR A 459	29.476	57.240	125.806	1.00	89.05	C
ATOM	1173	CD2 TYR A 459	31.737	57.903	125.681	1.00	89.13	C
ATOM	1174	CE1 TYR A 459	29.259	58.504	126.266	1.00	90.57	C
ATOM	1175	CE2 TYR A 459	31.444	59.165	126.177	1.00	90.01	C
ATOM	1176	CZ TYR A 459	30.152	59.486	126.502	1.00	91.08	C
ATOM	1177	OH TYR A 459	29.680	60.685	127.003	1.00	92.07	O
ATOM	1178	N THR A 460	30.044	53.813	121.918	1.00	89.04	N
ATOM	1179	CA THR A 460	30.135	52.479	121.354	1.00	91.44	C
ATOM	1180	C THR A 460	29.764	52.501	119.880	1.00	92.95	C
ATOM	1181	O THR A 460	29.011	51.660	119.381	1.00	93.70	O
ATOM	1182	CB THR A 460	29.206	51.507	122.105	1.00	91.84	C
ATOM	1183	OG1 THR A 460	28.435	52.146	123.118	1.00	92.33	O

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ATOM 1184	CG2 THR A 460	30.036 50.433 122.802 1.00 93.11	C
ATOM 1185	N PHE A 461	30.293 53.485 119.156 1.00 94.66	N
ATOM 1186	CA PHE A 461	29.937 53.571 117.743 1.00 95.99	C
ATOM 1187	C PHE A 461	30.457 52.502 116.795 1.00 97.27	C
ATOM 1188	O PHE A 461	29.707 52.075 115.884 1.00 97.97	O
ATOM 1189	CB PHE A 461	30.195 55.012 117.234 1.00 95.00	C
ATOM 1190	CG PHE A 461	28.849 55.690 117.222 1.00 93.86	C
ATOM 1191	CD1 PHE A 461	27.708 54.934 117.036 1.00 93.38	C
ATOM 1192	CD2 PHE A 461	28.725 57.045 117.407 1.00 94.19	C
ATOM 1193	CE1 PHE A 461	26.467 55.505 117.024 1.00 93.79	C
ATOM 1194	CE2 PHE A 461	27.478 57.635 117.393 1.00 94.10	C
ATOM 1195	CZ PHE A 461	26.349 56.866 117.199 1.00 94.05	C
ATOM 1196	N THR A 465	35.765 54.719 111.803 1.00128.15	N
ATOM 1197	CA THR A 465	36.448 55.536 112.810 1.00128.00	C
ATOM 1198	C THR A 465	36.314 57.024 112.518 1.00126.85	C
ATOM 1199	O THR A 465	35.594 57.732 113.235 1.00127.19	O
ATOM 1200	CB THR A 465	37.934 55.169 112.971 1.00128.63	C
ATOM 1201	OG1 THR A 465	38.671 56.294 113.484 1.00128.85	O
ATOM 1202	CG2 THR A 465	38.536 54.747 111.634 1.00128.96	C
ATOM 1203	N LEU A 466	36.948 57.527 111.457 1.00124.68	N
ATOM 1204	CA LEU A 466	36.834 58.946 111.109 1.00122.36	C
ATOM 1205	C LEU A 466	35.380 59.372 110.897 1.00120.14	C
ATOM 1206	O LEU A 466	35.004 60.513 111.209 1.00120.35	O
ATOM 1207	CB LEU A 466	37.690 59.272 109.888 1.00122.63	C
ATOM 1211	N LYS A 467	34.533 58.469 110.392 1.00116.55	N
ATOM 1212	CA LYS A 467	33.110 58.730 110.232 1.00112.66	C
ATOM 1213	C LYS A 467	32.523 58.682 111.649 1.00108.51	C
ATOM 1214	O LYS A 467	31.602 59.430 111.937 1.00108.43	O
ATOM 1215	CB LYS A 467	32.389 57.740 109.334 1.00114.21	C
ATOM 1216	CG LYS A 467	31.105 58.236 108.677 1.00115.22	C
ATOM 1217	CD LYS A 467	30.310 57.054 108.135 1.00116.49	C
ATOM 1218	CE LYS A 467	30.421 56.878 106.630 1.00117.28	C
ATOM 1219	NZ LYS A 467	29.774 55.614 106.152 1.00117.07	N
ATOM 1220	N SER A 468	33.064 57.846 112.522 1.00103.37	N
ATOM 1221	CA SER A 468	32.609 57.753 113.889 1.00 99.63	C
ATOM 1222	C SER A 468	32.923 59.038 114.652 1.00 96.39	C
ATOM 1223	O SER A 468	32.132 59.534 115.442 1.00 95.91	O
ATOM 1224	CB SER A 468	33.292 56.622 114.662 1.00100.41	C
ATOM 1225	OG SER A 468	32.848 55.358 114.205 1.00101.46	O
ATOM 1226	N LEU A 469	34.110 59.577 114.391 1.00 92.71	N
ATOM 1227	CA LEU A 469	34.540 60.806 115.050 1.00 89.37	C
ATOM 1228	C LEU A 469	33.583 61.906 114.627 1.00 86.96	C
ATOM 1229	O LEU A 469	33.213 62.769 115.417 1.00 86.78	O
ATOM 1230	CB LEU A 469	36.009 61.096 114.755 1.00 89.59	C
ATOM 1234	N GLU A 470	33.150 61.868 113.379 1.00 84.76	N

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ATOM	1235	CA	GLU A 470	32.201	62.860	112.869	1.00	83.39	C
ATOM	1236	C	GLU A 470	30.812	62.559	113.408	1.00	79.41	C
ATOM	1237	O	GLU A 470	30.032	63.445	113.738	1.00	78.64	O
ATOM	1238	CB	GLU A 470	32.342	62.911	111.369	1.00	87.27	C
ATOM	1239	CG	GLU A 470	31.065	62.883	110.562	1.00	92.97	C
ATOM	1240	CD	GLU A 470	31.323	62.549	109.097	1.00	96.39	C
ATOM	1241	OE1	GLU A 470	32.446	62.061	108.788	1.00	98.06	O
ATOM	1242	OE2	GLU A 470	30.391	62.787	108.287	1.00	98.00	O
ATOM	1243	N	GLU A 471	30.449	61.292	113.552	1.00	75.18	N
ATOM	1244	CA	GLU A 471	29.171	60.874	114.086	1.00	71.15	C
ATOM	1245	C	GLU A 471	29.131	61.290	115.557	1.00	70.67	C
ATOM	1246	O	GLU A 471	28.128	61.791	116.075	1.00	70.94	O
ATOM	1247	CB	GLU A 471	28.981	59.375	113.974	1.00	69.61	C
ATOM	1248	CG	GLU A 471	28.789	58.802	112.604	1.00	68.52	C
ATOM	1249	CD	GLU A 471	27.388	58.530	112.148	1.00	68.47	C
ATOM	1250	OE1	GLU A 471	26.700	57.643	112.673	1.00	68.63	O
ATOM	1251	OE2	GLU A 471	26.838	59.174	111.232	1.00	68.52	O
ATOM	1252	N	LYS A 472	30.239	61.091	116.276	1.00	69.50	N
ATOM	1253	CA	LYS A 472	30.304	61.470	117.680	1.00	67.78	C
ATOM	1254	C	LYS A 472	30.144	62.977	117.801	1.00	66.06	C
ATOM	1255	O	LYS A 472	29.374	63.355	118.685	1.00	65.63	O
ATOM	1256	CB	LYS A 472	31.582	61.016	118.375	1.00	69.03	C
ATOM	1257	CG	LYS A 472	31.596	59.526	118.666	1.00	71.43	C
ATOM	1258	CD	LYS A 472	32.719	59.148	119.613	1.00	74.06	C
ATOM	1259	CE	LYS A 472	33.355	57.803	119.260	1.00	76.26	C
ATOM	1260	NZ	LYS A 472	32.614	56.637	119.848	1.00	77.74	N
ATOM	1261	N	ASP A 473	30.801	63.781	116.967	1.00	64.80	N
ATOM	1262	CA	ASP A 473	30.640	65.221	117.111	1.00	65.40	C
ATOM	1263	C	ASP A 473	29.199	65.672	116.927	1.00	62.92	C
ATOM	1264	O	ASP A 473	28.600	66.391	117.720	1.00	63.45	O
ATOM	1265	CB	ASP A 473	31.424	66.063	116.113	1.00	69.21	C
ATOM	1266	CG	ASP A 473	32.907	65.839	116.318	1.00	73.72	C
ATOM	1267	OD1	ASP A 473	33.269	65.168	117.325	1.00	76.19	O
ATOM	1268	OD2	ASP A 473	33.656	66.347	115.447	1.00	75.94	O
ATOM	1269	N	HIS A 474	28.641	65.217	115.819	1.00	59.42	N
ATOM	1270	CA	HIS A 474	27.262	65.532	115.494	1.00	55.77	C
ATOM	1271	C	HIS A 474	26.393	65.294	116.722	1.00	54.86	C
ATOM	1272	O	HIS A 474	25.647	66.153	117.187	1.00	53.76	O
ATOM	1273	CB	HIS A 474	26.866	64.629	114.329	1.00	54.89	C
ATOM	1274	CG	HIS A 474	25.458	65.016	113.979	1.00	55.54	C
ATOM	1275	ND1	HIS A 474	25.171	66.330	113.614	1.00	55.25	N
ATOM	1276	CD2	HIS A 474	24.313	64.286	113.980	1.00	55.43	C
ATOM	1277	CE1	HIS A 474	23.866	66.361	113.387	1.00	56.29	C
ATOM	1278	NE2	HIS A 474	23.320	65.149	113.598	1.00	55.98	N
ATOM	1279	N	ILE A 475	26.480	64.088	117.288	1.00	54.45	N

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ATOM 1280 CA ILE A 475	25.722 63.746 118.478 1.00 53.71	C
ATOM 1281 C ILE A 475	26.053 64.724 119.585 1.00 53.96	C
ATOM 1282 O ILE A 475	25.121 65.322 120.128 1.00 53.46	O
ATOM 1283 CB ILE A 475	25.999 62.308 118.926 1.00 53.49	C
ATOM 1284 CG1 ILE A 475	25.364 61.404 117.863 1.00 53.66	C
ATOM 1285 CG2 ILE A 475	25.432 62.007 120.301 1.00 53.09	C
ATOM 1286 CD1 ILE A 475	25.393 59.944 118.252 1.00 54.52	C
ATOM 1287 N HIS A 476	27.320 64.950 119.903 1.00 55.34	N
ATOM 1288 CA HIS A 476	27.624 65.904 120.981 1.00 57.89	C
ATOM 1289 C HIS A 476	26.971 67.255 120.731 1.00 58.91	C
ATOM 1290 O HIS A 476	26.382 67.893 121.618 1.00 59.09	O
ATOM 1291 CB HIS A 476	29.130 65.985 121.193 1.00 59.86	C
ATOM 1292 CG HIS A 476	29.659 64.753 121.880 1.00 62.49	C
ATOM 1293 ND1 HIS A 476	29.029 64.204 122.990 1.00 63.31	N
ATOM 1294 CD2 HIS A 476	30.732 63.961 121.616 1.00 62.85	C
ATOM 1295 CE1 HIS A 476	29.711 63.127 123.367 1.00 63.56	C
ATOM 1296 NE2 HIS A 476	30.746 62.952 122.558 1.00 62.96	N
ATOM 1297 N ARG A 477	27.038 67.740 119.498 1.00 59.52	N
ATOM 1298 CA ARG A 477	26.460 68.980 119.064 1.00 59.70	C
ATOM 1299 C ARG A 477	24.959 69.067 119.275 1.00 57.63	C
ATOM 1300 O ARG A 477	24.427 70.089 119.694 1.00 58.84	O
ATOM 1301 CB ARG A 477	26.632 69.101 117.540 1.00 63.99	C
ATOM 1302 CG ARG A 477	27.000 70.530 117.174 1.00 69.78	C
ATOM 1303 CD ARG A 477	28.523 70.618 117.405 1.00 75.25	C
ATOM 1304 NE ARG A 477	29.161 69.714 116.427 1.00 80.64	N
ATOM 1305 CZ ARG A 477	29.270 70.046 115.125 1.00 83.23	C
ATOM 1306 NH1 ARG A 477	28.809 71.220 114.687 1.00 84.23	N
ATOM 1307 NH2 ARG A 477	29.857 69.181 114.292 1.00 84.33	N
ATOM 1308 N VAL A 478	24.224 68.019 118.942 1.00 54.59	N
ATOM 1309 CA VAL A 478	22.769 68.028 119.091 1.00 52.22	C
ATOM 1310 C VAL A 478	22.450 68.002 120.562 1.00 52.09	C
ATOM 1311 O VAL A 478	21.533 68.634 121.076 1.00 52.71	O
ATOM 1312 CB VAL A 478	22.193 66.824 118.345 1.00 51.81	C
ATOM 1313 CG1 VAL A 478	20.697 66.730 118.481 1.00 51.78	C
ATOM 1314 CG2 VAL A 478	22.608 66.961 116.880 1.00 51.76	C
ATOM 1315 N LEU A 479	23.269 67.251 121.307 1.00 51.70	N
ATOM 1316 CA LEU A 479	23.129 67.162 122.768 1.00 49.59	C
ATOM 1317 C LEU A 479	23.287 68.564 123.365 1.00 50.11	C
ATOM 1318 O LEU A 479	22.541 68.874 124.302 1.00 50.49	O
ATOM 1319 CB LEU A 479	24.122 66.152 123.331 1.00 46.17	C
ATOM 1320 CG LEU A 479	23.667 64.695 123.289 1.00 43.02	C
ATOM 1321 CD1 LEU A 479	24.794 63.777 123.708 1.00 42.85	C
ATOM 1322 CD2 LEU A 479	22.475 64.498 124.198 1.00 42.98	C
ATOM 1323 N ASP A 480	24.191 69.401 122.831 1.00 50.09	N
ATOM 1324 CA ASP A 480	24.318 70.749 123.362 1.00 51.30	C

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ATOM	1325	C	ASP A 480	23.049	71.538	123.043	1.00	52.02	C
ATOM	1326	O	ASP A 480	22.474	72.234	123.894	1.00	52.76	O
ATOM	1327	CB	ASP A 480	25.530	71.463	122.818	1.00	52.27	C
ATOM	1328	CG	ASP A 480	26.854	70.920	123.300	1.00	53.57	C
ATOM	1329	OD1	ASP A 480	26.911	70.289	124.371	1.00	54.43	O
ATOM	1330	OD2	ASP A 480	27.896	71.110	122.621	1.00	53.82	O
ATOM	1331	N	LYS A 481	22.555	71.404	121.820	1.00	53.08	N
ATOM	1332	CA	LYS A 481	21.331	72.106	121.440	1.00	54.53	C
ATOM	1333	C	LYS A 481	20.224	71.706	122.399	1.00	53.73	C
ATOM	1334	O	LYS A 481	19.568	72.572	122.972	1.00	54.44	O
ATOM	1335	CB	LYS A 481	20.954	71.790	120.005	1.00	58.12	C
ATOM	1336	CG	LYS A 481	19.876	72.721	119.466	1.00	63.38	C
ATOM	1337	CD	LYS A 481	20.501	73.909	118.728	1.00	67.75	C
ATOM	1338	CE	LYS A 481	19.617	75.156	118.745	1.00	70.46	C
ATOM	1339	NZ	LYS A 481	18.636	75.201	119.889	1.00	72.21	N
ATOM	1340	N	ILE A 482	20.016	70.405	122.634	1.00	52.20	N
ATOM	1341	CA	ILE A 482	18.973	69.958	123.549	1.00	50.20	C
ATOM	1342	C	ILE A 482	19.228	70.564	124.915	1.00	49.24	C
ATOM	1343	O	ILE A 482	18.284	71.029	125.561	1.00	48.46	O
ATOM	1344	CB	ILE A 482	18.795	68.444	123.582	1.00	49.95	C
ATOM	1345	CG1	ILE A 482	18.259	67.970	122.225	1.00	49.93	C
ATOM	1346	CG2	ILE A 482	17.788	67.989	124.619	1.00	49.78	C
ATOM	1347	CD1	ILE A 482	18.887	66.663	121.792	1.00	49.98	C
ATOM	1348	N	THR A 483	20.476	70.622	125.344	1.00	49.25	N
ATOM	1349	CA	THR A 483	20.752	71.251	126.637	1.00	50.71	C
ATOM	1350	C	THR A 483	20.211	72.687	126.644	1.00	52.28	C
ATOM	1351	O	THR A 483	19.466	73.054	127.592	1.00	51.98	O
ATOM	1352	CB	THR A 483	22.260	71.245	126.953	1.00	49.92	C
ATOM	1353	OG1	THR A 483	22.590	69.868	127.144	1.00	48.98	O
ATOM	1354	CG2	THR A 483	22.564	72.031	128.221	1.00	50.19	C
ATOM	1355	N	ASP A 484	20.596	73.439	125.576	1.00	51.42	N
ATOM	1356	CA	ASP A 484	20.142	74.829	125.467	1.00	50.56	C
ATOM	1357	C	ASP A 484	18.630	74.897	125.528	1.00	49.52	C
ATOM	1358	O	ASP A 484	18.033	75.668	126.279	1.00	50.06	O
ATOM	1359	CB	ASP A 484	20.661	75.526	124.233	1.00	51.89	C
ATOM	1360	CG	ASP A 484	22.179	75.649	124.176	1.00	53.29	C
ATOM	1361	OD1	ASP A 484	22.841	75.588	125.240	1.00	53.06	O
ATOM	1362	OD2	ASP A 484	22.706	75.807	123.039	1.00	53.68	O
ATOM	1363	N	THR A 485	17.958	74.020	124.804	1.00	49.22	N
ATOM	1364	CA	THR A 485	16.493	74.000	124.867	1.00	49.37	C
ATOM	1365	C	THR A 485	16.010	73.836	126.288	1.00	50.25	C
ATOM	1366	O	THR A 485	15.052	74.495	126.664	1.00	51.49	O
ATOM	1367	CB	THR A 485	16.011	72.824	124.002	1.00	48.58	C
ATOM	1368	OG1	THR A 485	16.663	73.087	122.735	1.00	48.26	O
ATOM	1369	CG2	THR A 485	14.507	72.817	123.930	1.00	47.80	C

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ATOM 1370 N LEU A 486	16.646 72.984 127.084 1.00 51.08	N
ATOM 1371 CA LEU A 486	16.235 72.755 128.462 1.00 50.84	C
ATOM 1372 C LEU A 486	16.336 74.020 129.300 1.00 51.72	C
ATOM 1373 O LEU A 486	15.392 74.395 130.004 1.00 50.51	O
ATOM 1374 CB LEU A 486	17.083 71.660 129.124 1.00 48.86	C
ATOM 1375 CG LEU A 486	16.471 70.263 129.060 1.00 47.10	C
ATOM 1376 CD1 LEU A 486	17.415 69.268 129.691 1.00 45.88	C
ATOM 1377 CD2 LEU A 486	15.096 70.250 129.689 1.00 46.89	C
ATOM 1378 N ILE A 487	17.513 74.654 129.183 1.00 53.22	N
ATOM 1379 CA ILE A 487	17.705 75.893 129.962 1.00 55.44	C
ATOM 1380 C ILE A 487	16.687 76.950 129.526 1.00 57.52	C
ATOM 1381 O ILE A 487	16.035 77.649 130.299 1.00 57.79	O
ATOM 1382 CB ILE A 487	19.102 76.458 129.740 1.00 54.89	C
ATOM 1383 CG1 ILE A 487	20.160 75.546 130.329 1.00 55.18	C
ATOM 1384 CG2 ILE A 487	19.110 77.846 130.342 1.00 55.82	C
ATOM 1385 CD1 ILE A 487	20.418 75.650 131.804 1.00 54.44	C
ATOM 1386 N HIS A 488	16.531 77.063 128.204 1.00 59.32	N
ATOM 1387 CA HIS A 488	15.571 77.978 127.629 1.00 60.40	C
ATOM 1388 C HIS A 488	14.232 77.757 128.321 1.00 59.31	C
ATOM 1389 O HIS A 488	13.649 78.686 128.844 1.00 60.16	O
ATOM 1390 CB HIS A 488	15.408 77.680 126.142 1.00 63.58	C
ATOM 1391 CG HIS A 488	14.246 78.450 125.585 1.00 67.04	C
ATOM 1392 ND1 HIS A 488	14.282 79.820 125.450 1.00 68.39	N
ATOM 1393 CD2 HIS A 488	13.025 78.034 125.163 1.00 68.41	C
ATOM 1394 CE1 HIS A 488	13.114 80.206 124.939 1.00 69.75	C
ATOM 1395 NE2 HIS A 488	12.335 79.151 124.751 1.00 69.52	N
ATOM 1396 N LEU A 489	13.736 76.538 128.329 1.00 58.27	N
ATOM 1397 CA LEU A 489	12.481 76.237 128.963 1.00 58.66	C
ATOM 1398 C LEU A 489	12.402 76.732 130.400 1.00 59.58	C
ATOM 1399 O LEU A 489	11.403 77.276 130.854 1.00 59.17	O
ATOM 1400 CB LEU A 489	12.311 74.713 128.965 1.00 58.09	C
ATOM 1401 CG LEU A 489	11.844 74.125 127.647 1.00 58.45	C
ATOM 1402 CD1 LEU A 489	12.022 72.613 127.653 1.00 59.37	C
ATOM 1403 CD2 LEU A 489	10.381 74.471 127.412 1.00 59.03	C
ATOM 1404 N MET A 490	13.449 76.507 131.175 1.00 61.06	N
ATOM 1405 CA MET A 490	13.534 76.844 132.581 1.00 62.01	C
ATOM 1406 C MET A 490	13.545 78.337 132.851 1.00 62.91	C
ATOM 1407 O MET A 490	12.912 78.802 133.806 1.00 64.21	O
ATOM 1408 CB MET A 490	14.828 76.267 133.171 1.00 62.02	C
ATOM 1409 CG MET A 490	14.631 74.896 133.800 1.00 62.27	C
ATOM 1410 SD MET A 490	16.240 74.108 133.935 1.00 63.57	S
ATOM 1411 CE MET A 490	15.813 72.389 133.645 1.00 63.55	C
ATOM 1412 N ALA A 491	14.282 79.049 132.003 1.00 62.99	N
ATOM 1413 CA ALA A 491	14.346 80.503 132.143 1.00 63.54	C
ATOM 1414 C ALA A 491	12.924 81.000 131.901 1.00 63.82	C

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ATOM 1415 O ALA A 491	12.370 81.706 132.732 1.00 63.44	O
ATOM 1416 CB ALA A 491	15.297 81.131 131.150 1.00 63.64	C
ATOM 1417 N LYS A 492	12.293 80.539 130.827 1.00 64.75	N
ATOM 1418 CA LYS A 492	10.914 80.911 130.527 1.00 65.96	C
ATOM 1419 C LYS A 492	10.021 80.636 131.715 1.00 66.48	C
ATOM 1420 O LYS A 492	9.077 81.396 131.931 1.00 68.10	O
ATOM 1421 CB LYS A 492	10.378 80.274 129.245 1.00 66.21	C
ATOM 1426 N ALA A 493	10.251 79.654 132.568 1.00 67.14	N
ATOM 1427 CA ALA A 493	9.427 79.420 133.741 1.00 68.33	C
ATOM 1428 C ALA A 493	9.936 80.330 134.867 1.00 69.79	C
ATOM 1429 O ALA A 493	9.512 80.309 136.034 1.00 70.80	O
ATOM 1430 CB ALA A 493	9.451 77.976 134.198 1.00 68.17	C
ATOM 1431 N GLY A 494	10.904 81.171 134.533 1.00 70.02	N
ATOM 1432 CA GLY A 494	11.503 82.121 135.424 1.00 70.56	C
ATOM 1433 C GLY A 494	12.186 81.486 136.606 1.00 70.48	C
ATOM 1434 O GLY A 494	11.743 81.753 137.723 1.00 71.77	O
ATOM 1435 N LEU A 495	13.210 80.665 136.388 1.00 70.08	N
ATOM 1436 CA LEU A 495	13.898 80.138 137.574 1.00 69.07	C
ATOM 1437 C LEU A 495	15.184 80.965 137.611 1.00 69.25	C
ATOM 1438 O LEU A 495	15.641 81.270 136.500 1.00 69.64	O
ATOM 1439 CB LEU A 495	14.322 78.702 137.497 1.00 68.82	C
ATOM 1440 CG LEU A 495	13.325 77.646 137.061 1.00 68.59	C
ATOM 1441 CD1 LEU A 495	13.911 76.265 137.307 1.00 68.14	C
ATOM 1442 CD2 LEU A 495	12.019 77.824 137.802 1.00 69.34	C
ATOM 1443 N THR A 496	15.704 81.275 138.775 1.00 69.48	N
ATOM 1444 CA THR A 496	16.970 82.025 138.757 1.00 70.96	C
ATOM 1445 C THR A 496	18.014 81.334 137.905 1.00 71.12	C
ATOM 1446 O THR A 496	17.950 80.134 137.620 1.00 72.23	O
ATOM 1447 CB THR A 496	17.559 81.950 140.176 1.00 71.91	C
ATOM 1448 OG1 THR A 496	16.519 82.393 141.074 1.00 73.47	O
ATOM 1449 CG2 THR A 496	18.843 82.729 140.317 1.00 72.96	C
ATOM 1450 N LEU A 497	19.065 82.027 137.519 1.00 71.69	N
ATOM 1451 CA LEU A 497	20.155 81.450 136.753 1.00 72.39	C
ATOM 1452 C LEU A 497	20.770 80.305 137.571 1.00 72.97	C
ATOM 1453 O LEU A 497	21.251 79.298 137.030 1.00 73.58	O
ATOM 1454 CB LEU A 497	21.204 82.515 136.508 1.00 73.26	C
ATOM 1455 CG LEU A 497	21.841 82.644 135.139 1.00 74.83	C
ATOM 1456 CD1 LEU A 497	23.368 82.634 135.296 1.00 74.97	C
ATOM 1457 CD2 LEU A 497	21.349 81.612 134.139 1.00 75.25	C
ATOM 1458 N GLN A 498	20.771 80.433 138.896 1.00 72.53	N
ATOM 1459 CA GLN A 498	21.320 79.378 139.727 1.00 72.61	C
ATOM 1460 C GLN A 498	20.306 78.254 139.801 1.00 71.51	C
ATOM 1461 O GLN A 498	20.710 77.090 139.784 1.00 72.93	O
ATOM 1462 CB GLN A 498	21.699 79.865 141.117 1.00 75.13	C
ATOM 1463 CG GLN A 498	21.645 78.783 142.173 1.00 78.79	C

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ATOM 1464	CD GLN A 498	22.214 79.124 143.530 1.00 81.00	C
ATOM 1465	OE1 GLN A 498	23.003 78.350 144.111 1.00 82.22	O
ATOM 1466	NE2 GLN A 498	21.816 80.276 144.072 1.00 81.61	N
ATOM 1467	N GLN A 499	19.010 78.517 139.857 1.00 69.60	N
ATOM 1468	CA GLN A 499	18.063 77.396 139.923 1.00 68.32	C
ATOM 1469	C GLN A 499	18.106 76.617 138.613 1.00 66.98	C
ATOM 1470	O GLN A 499	17.894 75.401 138.585 1.00 67.09	O
ATOM 1471	CB GLN A 499	16.637 77.886 140.146 1.00 68.80	C
ATOM 1472	CG GLN A 499	16.642 79.087 141.073 1.00 70.02	C
ATOM 1473	CD GLN A 499	15.243 79.327 141.580 1.00 72.22	C
ATOM 1474	OE1 GLN A 499	14.412 79.790 140.778 1.00 74.84	O
ATOM 1475	NE2 GLN A 499	15.057 78.987 142.847 1.00 72.27	N
ATOM 1476	N GLN A 500	18.368 77.371 137.537 1.00 64.49	N
ATOM 1477	CA GLN A 500	18.465 76.746 136.220 1.00 62.26	C
ATOM 1478	C GLN A 500	19.593 75.710 136.217 1.00 59.60	C
ATOM 1479	O GLN A 500	19.342 74.543 135.911 1.00 58.37	O
ATOM 1480	CB GLN A 500	18.708 77.808 135.181 1.00 63.12	C
ATOM 1481	CG GLN A 500	17.463 78.519 134.658 1.00 64.74	C
ATOM 1482	CD GLN A 500	17.963 79.800 133.982 1.00 66.27	C
ATOM 1483	OE1 GLN A 500	18.848 79.788 133.114 1.00 66.22	O
ATOM 1484	NE2 GLN A 500	17.384 80.912 134.424 1.00 67.21	N
ATOM 1485	N HIS A 501	20.807 76.092 136.615 1.00 57.06	N
ATOM 1486	CA HIS A 501	21.876 75.100 136.648 1.00 55.85	C
ATOM 1487	C HIS A 501	21.617 73.993 137.669 1.00 55.44	C
ATOM 1488	O HIS A 501	22.073 72.848 137.435 1.00 55.79	O
ATOM 1489	CB HIS A 501	23.272 75.670 136.782 1.00 55.47	C
ATOM 1490	CG AHIS A 501	23.695 76.322 138.044 0.50 54.57	C
ATOM 1491	CG BHIS A 501	23.475 76.910 135.961 0.50 56.84	C
ATOM 1492	ND1AHIS A 501	24.450 77.488 138.039 0.50 54.55	N
ATOM 1493	ND1BHIS A 501	23.207 76.943 134.609 0.50 57.07	N
ATOM 1494	CD2AHIS A 501	23.514 76.001 139.341 0.50 54.24	C
ATOM 1495	CD2BHIS A 501	23.907 78.150 136.295 0.50 57.00	C
ATOM 1496	CE1AHIS A 501	24.696 77.851 139.284 0.50 54.50	C
ATOM 1497	CE1BHIS A 501	23.466 78.153 134.146 0.50 57.29	C
ATOM 1498	NE2AHIS A 501	24.136 76.964 140.097 0.50 54.41	N
ATOM 1499	NE2BHIS A 501	23.887 78.906 135.149 0.50 57.12	N
ATOM 1500	N GLN A 502	20.902 74.236 138.763 1.00 53.58	N
ATOM 1501	CA GLN A 502	20.664 73.135 139.702 1.00 52.70	C
ATOM 1502	C GLN A 502	19.678 72.141 139.120 1.00 51.81	C
ATOM 1503	O GLN A 502	19.943 70.935 139.087 1.00 51.30	O
ATOM 1504	CB GLN A 502	20.207 73.722 141.030 1.00 53.98	C
ATOM 1505	CG GLN A 502	21.261 74.681 141.567 1.00 55.37	C
ATOM 1506	CD GLN A 502	21.120 74.994 143.034 1.00 56.88	C
ATOM 1507	OE1 GLN A 502	20.005 74.934 143.581 1.00 58.45	O
ATOM 1508	NE2 GLN A 502	22.259 75.327 143.643 1.00 56.57	N

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ATOM	1509	N	ARG A 503	18.556	72.607	138.574	1.00	50.84	N
ATOM	1510	CA	ARG A 503	17.570	71.742	137.948	1.00	49.11	C
ATOM	1511	C	ARG A 503	18.224	70.926	136.833	1.00	48.91	C
ATOM	1512	O	ARG A 503	18.000	69.712	136.750	1.00	51.21	O
ATOM	1513	CB	ARG A 503	16.434	72.514	137.261	1.00	48.05	C
ATOM	1514	CG	ARG A 503	15.201	71.634	137.089	1.00	46.69	C
ATOM	1515	CD	ARG A 503	13.958	72.465	136.865	1.00	45.33	C
ATOM	1516	NE	ARG A 503	12.869	71.641	136.368	1.00	46.09	N
ATOM	1517	CZ	ARG A 503	11.992	70.959	137.112	1.00	46.32	C
ATOM	1518	NH1	ARG A 503	12.076	70.988	138.438	1.00	45.38	N
ATOM	1519	NH2	ARG A 503	11.022	70.243	136.533	1.00	45.97	N
ATOM	1520	N	LEU A 504	19.020	71.592	136.000	1.00	46.31	N
ATOM	1521	CA	LEU A 504	19.671	70.862	134.922	1.00	45.01	C
ATOM	1522	C	LEU A 504	20.351	69.636	135.509	1.00	45.72	C
ATOM	1523	O	LEU A 504	20.031	68.494	135.196	1.00	46.55	O
ATOM	1524	CB	LEU A 504	20.701	71.708	134.184	1.00	42.72	C
ATOM	1525	CG	LEU A 504	21.245	71.069	132.910	1.00	41.21	C
ATOM	1526	CD1	LEU A 504	20.175	70.645	131.929	1.00	39.03	C
ATOM	1527	CD2	LEU A 504	22.269	72.018	132.296	1.00	41.69	C
ATOM	1528	N	ALA A 505	21.284	69.921	136.418	1.00	46.05	N
ATOM	1529	CA	ALA A 505	22.020	68.842	137.071	1.00	45.12	C
ATOM	1530	C	ALA A 505	21.039	67.884	137.720	1.00	46.07	C
ATOM	1531	O	ALA A 505	21.214	66.659	137.531	1.00	47.92	O
ATOM	1532	CB	ALA A 505	23.023	69.450	138.011	1.00	43.45	C
ATOM	1533	N	GLN A 506	19.999	68.330	138.426	1.00	45.79	N
ATOM	1534	CA	GLN A 506	19.110	67.322	139.006	1.00	47.26	C
ATOM	1535	C	GLN A 506	18.472	66.448	137.940	1.00	47.55	C
ATOM	1536	O	GLN A 506	18.349	65.234	138.187	1.00	48.38	O
ATOM	1537	CB	GLN A 506	18.075	67.845	140.001	1.00	48.39	C
ATOM	1538	CG	AGLN A 506	18.389	69.172	140.639	0.50	50.04	C
ATOM	1539	CG	BGLN A 506	18.778	68.216	141.328	0.50	47.76	C
ATOM	1540	CD	AGLN A 506	17.416	69.734	141.642	0.50	50.64	C
ATOM	1541	CD	BGLN A 506	19.110	67.009	142.176	0.50	47.69	C
ATOM	1542	OE1	AGLN A 506	16.190	69.674	141.507	0.50	50.81	O
ATOM	1543	OE1	BGLN A 506	18.592	65.912	141.895	0.50	48.97	O
ATOM	1544	NE2	AGLN A 506	17.983	70.309	142.704	0.50	50.90	N
ATOM	1545	NE2	BGLN A 506	19.941	67.142	143.194	0.50	46.36	N
ATOM	1546	N	LEU A 507	18.084	67.008	136.804	1.00	47.58	N
ATOM	1547	CA	LEU A 507	17.459	66.207	135.760	1.00	47.73	C
ATOM	1548	C	LEU A 507	18.407	65.182	135.162	1.00	47.79	C
ATOM	1549	O	LEU A 507	18.096	63.974	135.131	1.00	49.51	O
ATOM	1550	CB	LEU A 507	16.882	67.108	134.685	1.00	48.50	C
ATOM	1551	CG	LEU A 507	15.653	67.920	135.116	1.00	48.92	C
ATOM	1552	CD1	LEU A 507	15.253	68.828	133.952	1.00	50.13	C
ATOM	1553	CD2	LEU A 507	14.525	67.009	135.551	1.00	48.10	C

ATOM 1554 N LEU A 508	19.567 65.615 134.707 1.00 46.56	N
ATOM 1555 CA LEU A 508	20.567 64.717 134.132 1.00 44.95	C
ATOM 1556 C LEU A 508	21.067 63.710 135.148 1.00 44.15	C
ATOM 1557 O LEU A 508	21.378 62.581 134.708 1.00 45.36	O
ATOM 1558 CB LEU A 508	21.720 65.557 133.551 1.00 44.88	C
ATOM 1559 CG LEU A 508	21.283 66.552 132.472 1.00 44.46	C
ATOM 1560 CD1 LEU A 508	22.431 67.354 131.935 1.00 44.78	C
ATOM 1561 CD2 LEU A 508	20.679 65.822 131.280 1.00 46.15	C
ATOM 1562 N LEU A 509	21.128 63.978 136.459 1.00 42.06	N
ATOM 1563 CA LEU A 509	21.579 62.893 137.340 1.00 42.07	C
ATOM 1564 C LEU A 509	20.557 61.753 137.417 1.00 42.29	C
ATOM 1565 O LEU A 509	20.954 60.618 137.723 1.00 42.42	O
ATOM 1566 CB LEU A 509	21.964 63.302 138.749 1.00 41.22	C
ATOM 1567 CG LEU A 509	23.239 64.117 138.912 1.00 40.99	C
ATOM 1568 CD1 LEU A 509	23.332 64.611 140.339 1.00 40.83	C
ATOM 1569 CD2 LEU A 509	24.439 63.279 138.525 1.00 39.70	C
ATOM 1570 N ILE A 510	19.275 61.989 137.116 1.00 42.24	N
ATOM 1571 CA ILE A 510	18.297 60.895 137.130 1.00 42.89	C
ATOM 1572 C ILE A 510	18.639 59.913 136.004 1.00 41.94	C
ATOM 1573 O ILE A 510	18.438 58.698 136.142 1.00 41.71	O
ATOM 1574 CB ILE A 510	16.841 61.359 137.037 1.00 42.87	C
ATOM 1575 CG1 ILE A 510	16.335 61.760 138.439 1.00 44.12	C
ATOM 1576 CG2 ILE A 510	15.874 60.297 136.573 1.00 42.19	C
ATOM 1577 CD1 ILE A 510	15.616 63.111 138.389 1.00 45.79	C
ATOM 1578 N LEU A 511	19.196 60.421 134.908 1.00 40.88	N
ATOM 1579 CA LEU A 511	19.551 59.554 133.800 1.00 42.29	C
ATOM 1580 C LEU A 511	20.469 58.415 134.231 1.00 43.05	C
ATOM 1581 O LEU A 511	20.372 57.273 133.739 1.00 43.47	O
ATOM 1582 CB LEU A 511	20.138 60.345 132.646 1.00 42.79	C
ATOM 1583 CG LEU A 511	19.232 61.427 132.042 1.00 42.59	C
ATOM 1584 CD1 LEU A 511	19.905 61.905 130.754 1.00 42.80	C
ATOM 1585 CD2 LEU A 511	17.832 60.894 131.792 1.00 41.41	C
ATOM 1586 N SER A 512	21.353 58.661 135.190 1.00 42.45	N
ATOM 1587 CA SER A 512	22.199 57.597 135.692 1.00 41.97	C
ATOM 1588 C SER A 512	21.372 56.441 136.243 1.00 41.74	C
ATOM 1589 O SER A 512	21.593 55.272 135.918 1.00 41.94	O
ATOM 1590 CB SER A 512	22.949 58.205 136.883 1.00 42.66	C
ATOM 1591 OG SER A 512	24.235 57.651 136.722 1.00 46.60	O
ATOM 1592 N HIS A 513	20.399 56.796 137.105 1.00 40.14	N
ATOM 1593 CA HIS A 513	19.529 55.785 137.693 1.00 38.64	C
ATOM 1594 C HIS A 513	18.762 55.039 136.606 1.00 39.44	C
ATOM 1595 O HIS A 513	18.646 53.790 136.644 1.00 39.11	O
ATOM 1596 CB HIS A 513	18.604 56.417 138.732 1.00 37.52	C
ATOM 1597 CG AHIS A 513	19.490 56.911 139.845 0.50 38.84	C
ATOM 1598 CG BHIS A 513	17.864 55.372 139.515 0.50 37.43	C

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ATOM	1599	ND1AHIS A 513	19.619	58.233	140.201	0.50	39.06	N
ATOM	1600	ND1BHIS A 513	16.517	55.464	139.814	0.50	37.66	N
ATOM	1601	CD2AHIS A 513	20.322	56.227	140.676	0.50	39.28	C
ATOM	1602	CD2BHIS A 513	18.299	54.212	140.074	0.50	37.23	C
ATOM	1603	CE1AHIS A 513	20.479	58.344	141.205	0.50	38.40	C
ATOM	1604	CE1BHIS A 513	16.153	54.396	140.518	0.50	37.66	C
ATOM	1605	NE2AHIS A 513	20.919	57.143	141.514	0.50	38.49	N
ATOM	1606	NE2BHIS A 513	17.217	53.622	140.689	0.50	37.60	N
ATOM	1607	N ILE A 514	18.281	55.782	135.589	1.00	38.07	N
ATOM	1608	CA ILE A 514	17.584	55.117	134.490	1.00	37.70	C
ATOM	1609	C ILE A 514	18.533	54.140	133.822	1.00	37.71	C
ATOM	1610	O ILE A 514	18.163	52.987	133.547	1.00	37.51	O
ATOM	1611	CB ILE A 514	16.950	56.154	133.575	1.00	38.13	C
ATOM	1612	CG1 ILE A 514	15.716	56.726	134.296	1.00	37.64	C
ATOM	1613	CG2 ILE A 514	16.570	55.603	132.205	1.00	38.53	C
ATOM	1614	CD1 ILE A 514	15.430	58.128	133.808	1.00	37.44	C
ATOM	1615	N ARG A 515	19.796	54.505	133.622	1.00	38.16	N
ATOM	1616	CA ARG A 515	20.745	53.542	133.034	1.00	39.24	C
ATOM	1617	C ARG A 515	20.775	52.305	133.936	1.00	39.63	C
ATOM	1618	O ARG A 515	20.592	51.168	133.503	1.00	39.61	O
ATOM	1619	CB ARG A 515	22.162	54.093	132.921	1.00	39.22	C
ATOM	1620	CG ARG A 515	23.163	53.364	132.063	1.00	40.21	C
ATOM	1621	CD ARG A 515	22.636	53.155	130.689	1.00	44.06	C
ATOM	1622	NE ARG A 515	23.587	53.120	129.576	1.00	46.91	N
ATOM	1623	CZ ARG A 515	24.178	54.247	129.165	1.00	48.77	C
ATOM	1624	NH1 ARG A 515	23.949	55.429	129.752	1.00	49.82	N
ATOM	1625	NH2 ARG A 515	25.017	54.163	128.155	1.00	48.41	N
ATOM	1626	N HIS A 516	20.997	52.584	135.233	1.00	39.13	N
ATOM	1627	CA HIS A 516	21.081	51.538	136.221	1.00	38.90	C
ATOM	1628	C HIS A 516	19.936	50.555	136.121	1.00	39.18	C
ATOM	1629	O HIS A 516	20.140	49.355	135.970	1.00	37.84	O
ATOM	1630	CB HIS A 516	21.210	52.115	137.656	1.00	39.60	C
ATOM	1631	CG HIS A 516	21.440	50.946	138.595	1.00	39.71	C
ATOM	1632	ND1 HIS A 516	22.613	50.238	138.674	1.00	39.57	N
ATOM	1633	CD2 HIS A 516	20.608	50.321	139.453	1.00	39.43	C
ATOM	1634	CE1 HIS A 516	22.520	49.253	139.520	1.00	38.56	C
ATOM	1635	NE2 HIS A 516	21.300	49.283	140.017	1.00	38.92	N
ATOM	1636	N MET A 517	18.707	51.044	136.207	1.00	41.07	N
ATOM	1637	CA MET A 517	17.480	50.261	136.129	1.00	41.63	C
ATOM	1638	C MET A 517	17.341	49.430	134.871	1.00	41.41	C
ATOM	1639	O MET A 517	16.945	48.280	134.891	1.00	40.72	O
ATOM	1640	CB MET A 517	16.298	51.237	136.037	1.00	42.72	C
ATOM	1641	CG MET A 517	15.515	51.311	137.335	1.00	44.29	C
ATOM	1642	SD MET A 517	14.274	52.640	137.213	1.00	45.43	S
ATOM	1643	CE MET A 517	15.401	54.009	137.346	1.00	47.82	C

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ATOM 1644 N SER A 518	17.681 50.082 133.758 1.00 42.10	N
ATOM 1645 CA SER A 518	17.638 49.441 132.446 1.00 42.47	C
ATOM 1646 C SER A 518	18.569 48.244 132.411 1.00 42.00	C
ATOM 1647 O SER A 518	18.200 47.199 131.873 1.00 42.03	O
ATOM 1648 CB SER A 518	18.007 50.484 131.407 1.00 43.32	C
ATOM 1649 OG SER A 518	18.544 49.964 130.228 1.00 45.64	O
ATOM 1650 N ASN A 519	19.748 48.392 132.990 1.00 42.37	N
ATOM 1651 CA ASN A 519	20.713 47.295 133.030 1.00 44.29	C
ATOM 1652 C ASN A 519	20.084 46.169 133.831 1.00 44.94	C
ATOM 1653 O ASN A 519	20.079 45.036 133.362 1.00 46.19	O
ATOM 1654 CB ASN A 519	22.059 47.736 133.597 1.00 47.08	C
ATOM 1655 CG ASN A 519	22.911 48.548 132.631 1.00 49.35	C
ATOM 1656 OD1 ASN A 519	22.901 48.175 131.438 1.00 51.40	O
ATOM 1657 ND2 ASN A 519	23.625 49.607 133.033 1.00 48.18	N
ATOM 1658 N LYS A 520	19.498 46.414 134.995 1.00 44.94	N
ATOM 1659 CA LYS A 520	18.871 45.362 135.763 1.00 45.92	C
ATOM 1660 C LYS A 520	17.671 44.792 135.027 1.00 46.12	C
ATOM 1661 O LYS A 520	17.453 43.581 135.088 1.00 46.63	O
ATOM 1662 CB LYS A 520	18.367 45.898 137.088 1.00 48.44	C
ATOM 1663 CG LYS A 520	19.437 46.800 137.700 1.00 50.91	C
ATOM 1664 CD LYS A 520	20.181 45.926 138.689 1.00 53.34	C
ATOM 1665 CE LYS A 520	21.647 45.782 138.339 1.00 55.85	C
ATOM 1666 NZ LYS A 520	22.201 44.573 139.041 1.00 58.02	N
ATOM 1667 N GLY A 521	16.918 45.665 134.365 1.00 45.54	N
ATOM 1668 CA GLY A 521	15.807 45.181 133.568 1.00 45.58	C
ATOM 1669 C GLY A 521	16.270 44.202 132.482 1.00 45.78	C
ATOM 1670 O GLY A 521	15.561 43.182 132.432 1.00 45.24	O
ATOM 1671 N MET A 522	17.328 44.439 131.676 1.00 45.68	N
ATOM 1672 CA MET A 522	17.660 43.456 130.663 1.00 46.96	C
ATOM 1673 C MET A 522	18.061 42.141 131.346 1.00 48.31	C
ATOM 1674 O MET A 522	17.612 41.095 130.901 1.00 48.01	O
ATOM 1675 CB MET A 522	18.796 43.614 129.695 1.00 47.49	C
ATOM 1676 CG MET A 522	19.335 44.821 129.041 1.00 47.52	C
ATOM 1677 SD MET A 522	18.355 45.460 127.700 1.00 48.79	S
ATOM 1678 CE MET A 522	17.616 43.967 127.040 1.00 46.55	C
ATOM 1679 N GLU A 523	18.909 42.283 132.369 1.00 49.71	N
ATOM 1680 CA GLU A 523	19.336 41.083 133.075 1.00 51.07	C
ATOM 1681 C GLU A 523	18.137 40.248 133.475 1.00 48.53	C
ATOM 1682 O GLU A 523	18.134 39.039 133.310 1.00 48.65	O
ATOM 1683 CB GLU A 523	20.203 41.486 134.239 1.00 57.61	C
ATOM 1684 CG GLU A 523	21.688 41.593 133.956 1.00 64.95	C
ATOM 1685 CD GLU A 523	22.270 40.403 133.199 1.00 69.95	C
ATOM 1686 OE1 GLU A 523	21.645 39.297 133.221 1.00 72.64	O
ATOM 1687 OE2 GLU A 523	23.373 40.581 132.589 1.00 72.19	O
ATOM 1688 N HIS A 524	17.075 40.836 133.978 1.00 46.39	N

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ATOM 1689 CA HIS A 524	15.865 40.144 134.344 1.00 45.35	C
ATOM 1690 C HIS A 524	15.097 39.606 133.156 1.00 45.66	C
ATOM 1691 O HIS A 524	14.678 38.453 133.149 1.00 45.67	O
ATOM 1692 CB HIS A 524	14.953 41.109 135.115 1.00 43.98	C
ATOM 1693 CG HIS A 524	13.627 40.538 135.470 1.00 43.57	C
ATOM 1694 ND1 HIS A 524	12.542 40.552 134.611 1.00 44.22	N
ATOM 1695 CD2 HIS A 524	13.185 39.925 136.580 1.00 43.73	C
ATOM 1696 CE1 HIS A 524	11.505 39.982 135.189 1.00 44.25	C
ATOM 1697 NE2 HIS A 524	11.855 39.579 136.402 1.00 43.68	N
ATOM 1698 N LEU A 525	14.873 40.389 132.110 1.00 47.35	N
ATOM 1699 CA LEU A 525	14.074 39.974 130.954 1.00 49.08	C
ATOM 1700 C LEU A 525	14.721 38.741 130.341 1.00 51.79	C
ATOM 1701 O LEU A 525	14.098 37.840 129.819 1.00 51.57	O
ATOM 1702 CB LEU A 525	13.912 41.078 129.907 1.00 47.41	C
ATOM 1703 CG LEU A 525	13.259 40.641 128.599 1.00 46.29	C
ATOM 1704 CD1 LEU A 525	11.822 40.216 128.816 1.00 45.85	C
ATOM 1705 CD2 LEU A 525	13.321 41.793 127.618 1.00 45.98	C
ATOM 1706 N TYR A 526	16.043 38.747 130.444 1.00 55.42	N
ATOM 1707 CA TYR A 526	16.912 37.700 129.978 1.00 58.28	C
ATOM 1708 C TYR A 526	16.695 36.442 130.791 1.00 58.73	C
ATOM 1709 O TYR A 526	16.532 35.382 130.189 1.00 59.67	O
ATOM 1710 CB TYR A 526	18.351 38.203 130.088 1.00 60.44	C
ATOM 1711 CG TYR A 526	19.231 37.154 129.479 1.00 63.65	C
ATOM 1712 CD1 TYR A 526	19.396 37.063 128.120 1.00 66.19	C
ATOM 1713 CD2 TYR A 526	19.864 36.252 130.293 1.00 66.21	C
ATOM 1714 CE1 TYR A 526	20.206 36.096 127.562 1.00 69.05	C
ATOM 1715 CE2 TYR A 526	20.685 35.266 129.777 1.00 68.96	C
ATOM 1716 CZ TYR A 526	20.835 35.211 128.415 1.00 70.55	C
ATOM 1717 OH TYR A 526	21.647 34.235 127.874 1.00 74.44	O
ATOM 1718 N SER A 527	16.663 36.506 132.116 1.00 59.86	N
ATOM 1719 CA SER A 527	16.424 35.244 132.848 1.00 61.25	C
ATOM 1720 C SER A 527	14.992 34.837 132.564 1.00 61.87	C
ATOM 1721 O SER A 527	14.818 33.689 132.186 1.00 62.52	O
ATOM 1722 CB SER A 527	16.686 35.314 134.336 1.00 61.10	C
ATOM 1723 OG SER A 527	16.238 36.600 134.712 1.00 61.91	O
ATOM 1724 N MET A 528	14.008 35.720 132.619 1.00 62.93	N
ATOM 1725 CA MET A 528	12.643 35.385 132.249 1.00 63.77	C
ATOM 1726 C MET A 528	12.615 34.640 130.920 1.00 64.50	C
ATOM 1727 O MET A 528	11.878 33.669 130.756 1.00 63.77	O
ATOM 1728 CB MET A 528	11.800 36.650 132.126 1.00 64.26	C
ATOM 1729 CG MET A 528	11.182 37.186 133.395 1.00 64.61	C
ATOM 1730 SD MET A 528	10.838 35.959 134.659 1.00 65.93	S
ATOM 1731 CE MET A 528	12.311 36.036 135.659 1.00 64.66	C
ATOM 1732 N LYS A 529	13.400 35.038 129.935 1.00 66.98	N
ATOM 1733 CA LYS A 529	13.464 34.355 128.651 1.00 70.45	C

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ATOM 1734 C LYS A 529	14.098 32.973 128.783 1.00 72.45	C
ATOM 1735 O LYS A 529	13.658 32.014 128.150 1.00 72.88	O
ATOM 1736 CB LYS A 529	14.256 35.190 127.655 1.00 71.06	C
ATOM 1737 CG LYS A 529	15.273 34.456 126.823 1.00 73.17	C
ATOM 1738 CD LYS A 529	15.124 34.855 125.362 1.00 76.29	C
ATOM 1739 CE LYS A 529	16.242 34.243 124.511 1.00 78.75	C
ATOM 1740 NZ LYS A 529	17.601 34.302 125.151 1.00 80.14	N
ATOM 1741 N CYS A 530	15.153 32.854 129.573 1.00 75.18	N
ATOM 1742 CA CYS A 530	15.829 31.576 129.772 1.00 78.32	C
ATOM 1743 C CYS A 530	14.945 30.584 130.490 1.00 80.30	C
ATOM 1744 O CYS A 530	14.902 29.381 130.196 1.00 81.47	O
ATOM 1745 CB CYS A 530	17.171 31.869 130.438 1.00 78.84	C
ATOM 1746 SG ACYS A 530	18.275 32.752 129.297 0.50 79.21	S
ATOM 1747 SG BCYS A 530	17.568 30.622 131.680 0.50 81.24	S
ATOM 1748 N LYS A 531	14.102 31.009 131.421 1.00 82.32	N
ATOM 1749 CA LYS A 531	13.144 30.200 132.155 1.00 83.76	C
ATOM 1750 C LYS A 531	11.970 29.841 131.246 1.00 85.00	C
ATOM 1751 O LYS A 531	11.021 29.148 131.602 1.00 85.73	O
ATOM 1752 CB LYS A 531	12.572 30.964 133.355 1.00 83.88	C
ATOM 1753 CG LYS A 531	13.345 30.854 134.647 1.00 84.87	C
ATOM 1754 CD LYS A 531	14.805 31.287 134.574 1.00 85.69	C
ATOM 1757 N ASN A 532	11.943 30.327 130.025 1.00 86.68	N
ATOM 1758 CA ASN A 532	10.897 30.076 129.057 1.00 88.62	C
ATOM 1759 C ASN A 532	9.561 30.539 129.591 1.00 87.46	C
ATOM 1760 O ASN A 532	8.631 29.761 129.724 1.00 88.90	O
ATOM 1761 CB ASN A 532	10.865 28.584 128.719 1.00 91.95	C
ATOM 1762 CG ASN A 532	12.111 28.192 127.933 1.00 95.44	C
ATOM 1763 OD1 ASN A 532	12.541 28.919 127.018 1.00 97.13	O
ATOM 1764 ND2 ASN A 532	12.669 27.040 128.317 1.00 96.70	N
ATOM 1765 N VAL A 533	9.437 31.803 129.937 1.00 85.64	N
ATOM 1766 CA VAL A 533	8.226 32.396 130.477 1.00 84.02	C
ATOM 1767 C VAL A 533	7.754 33.510 129.545 1.00 83.66	C
ATOM 1768 O VAL A 533	6.622 33.965 129.431 1.00 84.28	O
ATOM 1769 CB VAL A 533	8.579 33.025 131.836 1.00 83.74	C
ATOM 1770 CG1 VAL A 533	7.314 33.478 132.539 1.00 84.23	C
ATOM 1771 CG2 VAL A 533	9.365 32.100 132.744 1.00 83.35	C
ATOM 1772 N VAL A 534	8.709 34.036 128.803 1.00 82.83	N
ATOM 1773 CA VAL A 534	8.538 35.100 127.846 1.00 82.58	C
ATOM 1774 C VAL A 534	8.243 34.525 126.465 1.00 82.12	C
ATOM 1775 O VAL A 534	8.956 33.657 125.956 1.00 81.14	O
ATOM 1776 CB VAL A 534	9.852 35.922 127.723 1.00 83.39	C
ATOM 1777 CG1 VAL A 534	9.874 36.971 126.614 1.00 83.09	C
ATOM 1778 CG2 VAL A 534	10.138 36.622 129.047 1.00 84.00	C
ATOM 1779 N PRO A 535	7.211 35.078 125.856 1.00 81.83	N
ATOM 1780 CA PRO A 535	6.814 34.762 124.508 1.00 82.27	C

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ATOM	1781	C	PRO A 535	7.903	35.219	123.523	1.00	83.08	C
ATOM	1782	O	PRO A 535	8.852	35.993	123.727	1.00	81.80	O
ATOM	1783	CB	PRO A 535	5.489	35.480	124.209	1.00	81.89	C
ATOM	1784	CG	PRO A 535	5.161	36.150	125.500	1.00	81.49	C
ATOM	1785	CD	PRO A 535	6.365	36.127	126.413	1.00	81.75	C
ATOM	1786	N	LEU A 536	7.710	34.667	122.314	1.00	84.28	N
ATOM	1787	CA	LEU A 536	8.585	34.888	121.181	1.00	84.76	C
ATOM	1788	C	LEU A 536	8.321	36.144	120.362	1.00	83.94	C
ATOM	1789	O	LEU A 536	8.224	36.055	119.125	1.00	84.95	O
ATOM	1794	N	TYR A 537	8.213	37.297	121.028	1.00	81.31	N
ATOM	1795	CA	TYR A 537	7.998	38.516	120.254	1.00	78.44	C
ATOM	1796	C	TYR A 537	9.356	38.798	119.616	1.00	76.32	C
ATOM	1797	O	TYR A 537	10.358	38.868	120.302	1.00	74.82	O
ATOM	1798	CB	TYR A 537	7.515	39.639	121.120	1.00	79.11	C
ATOM	1799	CG	TYR A 537	6.202	39.346	121.803	1.00	79.98	C
ATOM	1800	CD1	TYR A 537	5.051	39.111	121.078	1.00	80.95	C
ATOM	1801	CD2	TYR A 537	6.097	39.316	123.180	1.00	80.52	C
ATOM	1802	CE1	TYR A 537	3.834	38.849	121.682	1.00	81.26	C
ATOM	1803	CE2	TYR A 537	4.888	39.059	123.788	1.00	80.94	C
ATOM	1804	CZ	TYR A 537	3.759	38.826	123.052	1.00	81.36	C
ATOM	1805	OH	TYR A 537	2.544	38.569	123.656	1.00	81.97	O
ATOM	1806	N	ASP A 538	9.336	38.912	118.299	1.00	74.66	N
ATOM	1807	CA	ASP A 538	10.514	39.140	117.499	1.00	71.95	C
ATOM	1808	C	ASP A 538	11.270	40.430	117.671	1.00	66.96	C
ATOM	1809	O	ASP A 538	12.485	40.348	117.818	1.00	66.05	O
ATOM	1810	CB	ASP A 538	10.065	39.019	116.029	1.00	77.04	C
ATOM	1811	CG	ASP A 538	10.164	37.552	115.613	1.00	81.25	C
ATOM	1812	OD1	ASP A 538	11.125	36.875	116.066	1.00	83.37	O
ATOM	1813	OD2	ASP A 538	9.308	37.060	114.837	1.00	83.49	O
ATOM	1814	N	LEU A 539	10.635	41.587	117.635	1.00	61.63	N
ATOM	1815	CA	LEU A 539	11.356	42.857	117.766	1.00	56.44	C
ATOM	1816	C	LEU A 539	11.971	42.988	119.139	1.00	56.25	C
ATOM	1817	O	LEU A 539	13.082	43.499	119.280	1.00	56.68	O
ATOM	1818	CB	LEU A 539	10.416	44.005	117.465	1.00	54.10	C
ATOM	1819	CG	LEU A 539	10.884	45.430	117.325	1.00	51.84	C
ATOM	1820	CD1	LEU A 539	12.181	45.567	116.558	1.00	52.42	C
ATOM	1821	CD2	LEU A 539	9.833	46.284	116.643	1.00	50.66	C
ATOM	1822	N	LEU A 540	11.279	42.532	120.186	1.00	55.25	N
ATOM	1823	CA	LEU A 540	11.747	42.556	121.561	1.00	52.61	C
ATOM	1824	C	LEU A 540	12.920	41.597	121.684	1.00	52.69	C
ATOM	1825	O	LEU A 540	13.927	41.999	122.263	1.00	53.12	O
ATOM	1826	CB	LEU A 540	10.646	42.178	122.551	1.00	51.55	C
ATOM	1827	CG	LEU A 540	10.979	42.209	124.044	1.00	50.31	C
ATOM	1828	CD1	LEU A 540	10.994	43.630	124.578	1.00	49.58	C
ATOM	1829	CD2	LEU A 540	10.015	41.374	124.860	1.00	49.08	C

ATOM	1830	N	LEU A 541	12.912	40.392	121.120	1.00	53.25	N
ATOM	1831	CA	LEU A 541	14.101	39.545	121.260	1.00	54.56	C
ATOM	1832	C	LEU A 541	15.275	40.173	120.547	1.00	54.25	C
ATOM	1833	O	LEU A 541	16.423	40.023	120.961	1.00	54.16	O
ATOM	1834	CB	LEU A 541	13.859	38.083	120.866	1.00	57.01	C
ATOM	1835	CG	LEU A 541	12.698	37.544	121.732	1.00	60.82	C
ATOM	1836	CD1	LEU A 541	12.209	36.167	121.314	1.00	62.47	C
ATOM	1837	CD2	LEU A 541	13.049	37.574	123.229	1.00	61.75	C
ATOM	1838	N	GLU A 542	14.992	40.899	119.471	1.00	54.26	N
ATOM	1839	CA	GLU A 542	16.027	41.556	118.683	1.00	53.12	C
ATOM	1840	C	GLU A 542	16.691	42.577	119.585	1.00	51.67	C
ATOM	1841	O	GLU A 542	17.900	42.478	119.744	1.00	51.95	O
ATOM	1842	CB	GLU A 542	15.445	42.162	117.427	1.00	53.98	C
ATOM	1843	CG	GLU A 542	16.400	42.857	116.484	1.00	55.78	C
ATOM	1844	CD	GLU A 542	15.649	43.376	115.266	1.00	58.34	C
ATOM	1845	OE1	GLU A 542	14.663	42.694	114.829	1.00	60.25	O
ATOM	1846	OE2	GLU A 542	16.048	44.460	114.767	1.00	58.07	O
ATOM	1847	N	MET A 543	15.944	43.494	120.177	1.00	50.07	N
ATOM	1848	CA	MET A 543	16.580	44.490	121.036	1.00	49.79	C
ATOM	1849	C	MET A 543	17.294	43.865	122.216	1.00	50.54	C
ATOM	1850	O	MET A 543	18.367	44.278	122.671	1.00	50.86	O
ATOM	1851	CB	MET A 543	15.478	45.443	121.473	1.00	49.84	C
ATOM	1852	CG	MET A 543	14.763	46.012	120.257	1.00	49.99	C
ATOM	1853	SD	MET A 543	15.889	47.224	119.532	1.00	51.42	S
ATOM	1854	CE	MET A 543	16.002	46.573	117.868	1.00	52.67	C
ATOM	1855	N	LEU A 544	16.721	42.817	122.799	1.00	51.05	N
ATOM	1856	CA	LEU A 544	17.373	42.139	123.916	1.00	51.48	C
ATOM	1857	C	LEU A 544	18.681	41.517	123.446	1.00	52.53	C
ATOM	1858	O	LEU A 544	19.627	41.652	124.184	1.00	50.61	O
ATOM	1859	CB	LEU A 544	16.452	41.097	124.533	1.00	50.42	C
ATOM	1860	CG	LEU A 544	17.050	40.113	125.523	1.00	49.69	C
ATOM	1861	CD1	LEU A 544	17.542	40.748	126.802	1.00	48.63	C
ATOM	1862	CD2	LEU A 544	15.983	39.102	125.920	1.00	51.35	C
ATOM	1863	N	ASP A 545	18.757	40.869	122.287	1.00	56.70	N
ATOM	1864	CA	ASP A 545	19.988	40.255	121.817	1.00	60.36	C
ATOM	1865	C	ASP A 545	21.066	41.289	121.558	1.00	59.91	C
ATOM	1866	O	ASP A 545	22.212	40.963	121.835	1.00	60.10	O
ATOM	1867	CB	ASP A 545	19.904	39.418	120.546	1.00	65.12	C
ATOM	1868	CG	ASP A 545	19.042	38.183	120.715	1.00	70.27	C
ATOM	1869	OD1	ASP A 545	18.749	37.755	121.866	1.00	72.54	O
ATOM	1870	OD2	ASP A 545	18.633	37.616	119.659	1.00	73.11	O
ATOM	1871	N	ALA A 546	20.752	42.487	121.112	1.00	59.97	N
ATOM	1872	CA	ALA A 546	21.760	43.504	120.873	1.00	60.66	C
ATOM	1873	C	ALA A 546	22.664	43.626	122.080	1.00	62.15	C
ATOM	1874	O	ALA A 546	23.876	43.705	121.994	1.00	62.27	O

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ATOM	1875	CB	ALA A 546	21.107	44.838	120.583	1.00	60.71	C
ATOM	1876	N	HIS A 547	22.091	43.661	123.255	1.00	65.48	N
ATOM	1877	CA	HIS A 547	22.761	43.757	124.518	1.00	68.64	C
ATOM	1878	C	HIS A 547	23.569	42.542	124.885	1.00	72.97	C
ATOM	1879	O	HIS A 547	24.712	42.691	125.315	1.00	74.48	O
ATOM	1880	CB	HIS A 547	21.675	43.917	125.615	1.00	67.28	C
ATOM	1881	CG	HIS A 547	21.296	45.359	125.461	1.00	66.25	C
ATOM	1882	ND1	HIS A 547	21.835	46.320	126.263	1.00	66.20	N
ATOM	1883	CD2	HIS A 547	20.494	45.969	124.564	1.00	66.17	C
ATOM	1884	CE1	HIS A 547	21.357	47.495	125.884	1.00	66.29	C
ATOM	1885	NE2	HIS A 547	20.548	47.304	124.862	1.00	66.21	N
ATOM	1886	N	ARG A 548	23.003	41.356	124.763	1.00	78.28	N
ATOM	1887	CA	ARG A 548	23.759	40.154	125.151	1.00	83.35	C
ATOM	1888	C	ARG A 548	24.984	39.999	124.265	1.00	84.77	C
ATOM	1889	O	ARG A 548	25.069	40.714	123.225	1.00	86.49	O
ATOM	1890	CB	ARG A 548	22.829	38.948	125.121	1.00	86.82	C
ATOM	1891	CG	ARG A 548	21.361	39.149	125.449	1.00	89.83	C
ATOM	1892	CD	ARG A 548	21.020	39.761	126.785	1.00	92.55	C
ATOM	1893	NE	ARG A 548	21.995	39.680	127.859	1.00	95.39	N
ATOM	1894	CZ	ARG A 548	22.098	40.433	128.956	1.00	96.08	C
ATOM	1895	NH1	ARG A 548	21.245	41.413	129.212	1.00	96.20	N
ATOM	1896	NH2	ARG A 548	23.083	40.192	129.818	1.00	96.52	N
TER	1897		ARG A 548						
HETATM	1898	C1	EST A 600	7.102	47.142	129.486	1.00	36.56	C
HETATM	1899	C2	EST A 600	6.560	48.235	128.813	1.00	37.90	C
HETATM	1900	C3	EST A 600	7.014	49.470	129.169	1.00	38.74	C
HETATM	1901	O3	EST A 600	6.496	50.565	128.516	1.00	40.63	O
HETATM	1902	C4	EST A 600	7.967	49.708	130.161	1.00	38.06	C
HETATM	1903	C5	EST A 600	8.491	48.586	130.826	1.00	36.82	C
HETATM	1904	C6	EST A 600	9.258	48.854	132.091	1.00	36.61	C
HETATM	1905	C7	EST A 600	9.604	47.590	132.865	1.00	36.56	C
HETATM	1906	C8	EST A 600	9.907	46.437	131.913	1.00	35.66	C
HETATM	1907	C9	EST A 600	8.609	46.101	131.152	1.00	35.75	C
HETATM	1908	C10	EST A 600	8.061	47.312	130.477	1.00	35.73	C
HETATM	1909	C11	EST A 600	8.849	44.959	130.164	1.00	35.57	C
HETATM	1910	C12	EST A 600	9.240	43.671	130.952	1.00	35.63	C
HETATM	1911	C13	EST A 600	10.500	44.009	131.736	1.00	35.66	C
HETATM	1912	C14	EST A 600	10.259	45.202	132.685	1.00	34.91	C
HETATM	1913	C15	EST A 600	11.613	45.194	133.406	1.00	35.31	C
HETATM	1914	C16	EST A 600	11.639	43.708	133.916	1.00	35.55	C
HETATM	1915	C17	EST A 600	10.914	42.967	132.778	1.00	36.16	C
HETATM	1916	O17	EST A 600	11.695	41.883	132.293	1.00	37.09	O
HETATM	1917	C18	EST A 600	11.641	44.234	130.755	1.00	35.32	C
ATOM	1918	N	SER B 305	25.272	71.505	158.635	1.00	90.04	N
ATOM	1919	CA	SER B 305	26.307	70.711	157.888	1.00	89.11	C

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ATOM 1920 C SER B 305	27.429 71.556 157.295 1.00 88.55	C
ATOM 1921 O SER B 305	27.225 72.515 156.538 1.00 88.16	O
ATOM 1922 CB SER B 305	25.569 69.949 156.772 1.00 88.41	C
ATOM 1923 OG SER B 305	26.477 69.152 156.035 1.00 87.79	O
ATOM 1924 N LEU B 306	28.675 71.164 157.597 1.00 87.86	N
ATOM 1925 CA LEU B 306	29.821 71.887 157.029 1.00 87.60	C
ATOM 1926 C LEU B 306	29.536 72.009 155.533 1.00 85.97	C
ATOM 1927 O LEU B 306	29.480 73.076 154.950 1.00 86.12	O
ATOM 1928 CB LEU B 306	31.152 71.166 157.258 1.00 88.10	C
ATOM 1932 N ALA B 307	29.293 70.870 154.904 1.00 84.33	N
ATOM 1933 CA ALA B 307	28.954 70.789 153.506 1.00 83.05	C
ATOM 1934 C ALA B 307	28.195 72.031 153.075 1.00 82.15	C
ATOM 1935 O ALA B 307	28.688 72.783 152.238 1.00 82.40	O
ATOM 1936 CB ALA B 307	28.050 69.587 153.251 1.00 83.80	C
ATOM 1937 N LEU B 308	27.028 72.255 153.665 1.00 81.16	N
ATOM 1938 CA LEU B 308	26.224 73.402 153.311 1.00 81.25	C
ATOM 1939 C LEU B 308	26.784 74.764 153.634 1.00 82.03	C
ATOM 1940 O LEU B 308	26.112 75.750 153.276 1.00 84.12	O
ATOM 1941 CB LEU B 308	24.833 73.206 153.918 1.00 80.91	C
ATOM 1942 CG LEU B 308	24.119 71.927 153.501 1.00 81.19	C
ATOM 1943 CD1 LEU B 308	22.625 72.029 153.804 1.00 82.22	C
ATOM 1944 CD2 LEU B 308	24.303 71.612 152.027 1.00 81.42	C
ATOM 1945 N SER B 309	27.935 74.951 154.242 1.00 81.15	N
ATOM 1946 CA SER B 309	28.504 76.235 154.570 1.00 80.23	C
ATOM 1947 C SER B 309	29.757 76.570 153.798 1.00 78.85	C
ATOM 1948 O SER B 309	30.061 77.749 153.621 1.00 80.10	O
ATOM 1949 CB SER B 309	28.945 76.199 156.048 1.00 81.60	C
ATOM 1950 OG SER B 309	27.839 75.621 156.755 1.00 84.43	O
ATOM 1951 N LEU B 310	30.509 75.562 153.373 1.00 76.88	N
ATOM 1952 CA LEU B 310	31.727 75.890 152.636 1.00 74.77	C
ATOM 1953 C LEU B 310	31.351 76.645 151.352 1.00 73.88	C
ATOM 1954 O LEU B 310	30.248 76.603 150.819 1.00 73.10	O
ATOM 1955 CB LEU B 310	32.577 74.676 152.338 1.00 74.13	C
ATOM 1956 CG LEU B 310	32.501 73.548 153.358 1.00 73.86	C
ATOM 1957 CD1 LEU B 310	31.862 72.354 152.682 1.00 73.73	C
ATOM 1958 CD2 LEU B 310	33.893 73.207 153.878 1.00 74.39	C
ATOM 1959 N THR B 311	32.356 77.379 150.891 1.00 72.63	N
ATOM 1960 CA THR B 311	32.217 78.181 149.680 1.00 71.48	C
ATOM 1961 C THR B 311	32.717 77.311 148.556 1.00 70.23	C
ATOM 1962 O THR B 311	33.526 76.425 148.873 1.00 69.71	O
ATOM 1963 CB THR B 311	33.046 79.459 149.869 1.00 72.04	C
ATOM 1964 OG1 THR B 311	34.432 79.184 150.007 1.00 71.51	O
ATOM 1965 CG2 THR B 311	32.624 80.144 151.172 1.00 72.51	C
ATOM 1966 N ALA B 312	32.343 77.539 147.311 1.00 69.55	N
ATOM 1967 CA ALA B 312	32.847 76.686 146.239 1.00 69.89	C

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ATOM 1968 C ALA B 312	34.355 76.490 146.399 1.00 70.66	C
ATOM 1969 O ALA B 312	34.812 75.352 146.204 1.00 71.02	O
ATOM 1970 CB ALA B 312	32.533 77.194 144.852 1.00 69.74	C
ATOM 1971 N ASP B 313	35.109 77.532 146.738 1.00 71.01	N
ATOM 1972 CA ASP B 313	36.532 77.350 146.907 1.00 72.28	C
ATOM 1973 C ASP B 313	36.896 76.400 148.016 1.00 71.15	C
ATOM 1974 O ASP B 313	37.776 75.572 147.780 1.00 70.97	O
ATOM 1975 CB ASP B 313	37.207 78.709 147.104 1.00 76.97	C
ATOM 1976 CG ASP B 313	37.316 79.339 145.715 1.00 81.71	C
ATOM 1977 OD1 ASP B 313	37.885 78.667 144.807 1.00 83.39	O
ATOM 1978 OD2 ASP B 313	36.821 80.490 145.531 1.00 84.01	O
ATOM 1979 N GLN B 314	36.282 76.463 149.186 1.00 70.43	N
ATOM 1980 CA GLN B 314	36.617 75.551 150.272 1.00 70.03	C
ATOM 1981 C GLN B 314	36.258 74.111 149.897 1.00 68.40	C
ATOM 1982 O GLN B 314	37.035 73.183 150.134 1.00 68.40	O
ATOM 1983 CB GLN B 314	35.863 75.933 151.539 1.00 72.10	C
ATOM 1984 CG GLN B 314	35.710 77.430 151.674 1.00 74.15	C
ATOM 1985 CD GLN B 314	35.109 77.833 153.005 1.00 75.96	C
ATOM 1986 OE1 GLN B 314	33.942 78.211 153.112 1.00 77.07	O
ATOM 1987 NE2 GLN B 314	35.968 77.728 154.015 1.00 76.35	N
ATOM 1988 N MET B 315	35.068 73.967 149.304 1.00 65.55	N
ATOM 1989 CA MET B 315	34.585 72.674 148.838 1.00 62.07	C
ATOM 1990 C MET B 315	35.664 72.028 147.976 1.00 60.02	C
ATOM 1991 O MET B 315	36.124 70.920 148.247 1.00 58.85	O
ATOM 1992 CB MET B 315	33.289 72.894 148.070 1.00 61.80	C
ATOM 1993 CG MET B 315	32.588 71.654 147.554 1.00 62.43	C
ATOM 1994 SD MET B 315	31.499 70.886 148.793 1.00 62.75	S
ATOM 1995 CE MET B 315	32.375 69.332 148.932 1.00 62.81	C
ATOM 1996 N VAL B 316	36.101 72.735 146.936 1.00 58.75	N
ATOM 1997 CA VAL B 316	37.113 72.194 146.044 1.00 59.58	C
ATOM 1998 C VAL B 316	38.356 71.690 146.767 1.00 60.61	C
ATOM 1999 O VAL B 316	38.881 70.619 146.456 1.00 61.28	O
ATOM 2000 CB VAL B 316	37.610 73.173 144.958 1.00 59.08	C
ATOM 2001 CG1 VAL B 316	38.727 72.541 144.132 1.00 58.28	C
ATOM 2002 CG2 VAL B 316	36.478 73.560 144.022 1.00 59.27	C
ATOM 2003 N SER B 317	38.877 72.498 147.672 1.00 61.25	N
ATOM 2004 CA SER B 317	40.097 72.148 148.395 1.00 61.71	C
ATOM 2005 C SER B 317	39.843 70.994 149.344 1.00 60.20	C
ATOM 2006 O SER B 317	40.676 70.092 149.474 1.00 60.58	O
ATOM 2007 CB SER B 317	40.539 73.355 149.236 1.00 64.18	C
ATOM 2008 OG SER B 317	39.510 74.345 149.098 1.00 67.30	O
ATOM 2009 N ALA B 318	38.668 71.040 149.975 1.00 57.91	N
ATOM 2010 CA ALA B 318	38.335 69.952 150.891 1.00 56.48	C
ATOM 2011 C ALA B 318	38.428 68.646 150.098 1.00 55.76	C
ATOM 2012 O ALA B 318	38.992 67.662 150.580 1.00 55.85	O

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ATOM	2013	CB	ALA B 318	36.946	70.127	151.461	1.00	56.32	C
ATOM	2014	N	LEU B 319	37.855	68.687	148.891	1.00	54.38	N
ATOM	2015	CA	LEU B 319	37.824	67.501	148.044	1.00	53.50	C
ATOM	2016	C	LEU B 319	39.205	67.171	147.565	1.00	54.80	C
ATOM	2017	O	LEU B 319	39.674	66.048	147.650	1.00	54.87	O
ATOM	2018	CB	LEU B 319	36.878	67.720	146.888	1.00	51.65	C
ATOM	2019	CG	LEU B 319	35.392	67.769	147.282	1.00	51.14	C
ATOM	2020	CD1	LEU B 319	34.606	68.162	146.040	1.00	50.92	C
ATOM	2021	CD2	LEU B 319	34.931	66.463	147.916	1.00	49.29	C
ATOM	2022	N	LEU B 320	39.921	68.193	147.116	1.00	57.27	N
ATOM	2023	CA	LEU B 320	41.298	68.008	146.647	1.00	58.44	C
ATOM	2024	C	LEU B 320	42.131	67.387	147.747	1.00	60.71	C
ATOM	2025	O	LEU B 320	43.023	66.589	147.492	1.00	61.28	O
ATOM	2026	CB	LEU B 320	41.847	69.356	146.194	1.00	57.26	C
ATOM	2027	CG	LEU B 320	41.571	69.548	144.707	1.00	57.56	C
ATOM	2028	CD1	LEU B 320	42.037	70.904	144.200	1.00	58.40	C
ATOM	2029	CD2	LEU B 320	42.260	68.415	143.954	1.00	57.16	C
ATOM	2030	N	ASP B 321	41.848	67.748	148.988	1.00	63.60	N
ATOM	2031	CA	ASP B 321	42.558	67.207	150.114	1.00	67.77	C
ATOM	2032	C	ASP B 321	42.264	65.767	150.479	1.00	66.98	C
ATOM	2033	O	ASP B 321	43.153	65.028	150.905	1.00	68.46	O
ATOM	2034	CB	ASP B 321	42.159	68.035	151.346	1.00	73.48	C
ATOM	2035	CG	ASP B 321	43.357	68.907	151.702	1.00	78.86	C
ATOM	2036	OD1	ASP B 321	44.358	68.838	150.933	1.00	80.91	O
ATOM	2037	OD2	ASP B 321	43.234	69.622	152.738	1.00	81.75	O
ATOM	2038	N	ALA B 322	41.013	65.337	150.345	1.00	64.01	N
ATOM	2039	CA	ALA B 322	40.651	63.979	150.713	1.00	60.43	C
ATOM	2040	C	ALA B 322	41.260	62.949	149.783	1.00	59.13	C
ATOM	2041	O	ALA B 322	41.306	61.772	150.141	1.00	58.64	O
ATOM	2042	CB	ALA B 322	39.130	63.958	150.695	1.00	59.91	C
ATOM	2043	N	GLU B 323	41.711	63.341	148.596	1.00	57.38	N
ATOM	2044	CA	GLU B 323	42.265	62.393	147.650	1.00	56.07	C
ATOM	2045	C	GLU B 323	43.165	61.402	148.323	1.00	55.73	C
ATOM	2046	O	GLU B 323	43.982	61.745	149.167	1.00	58.17	O
ATOM	2047	CB	GLU B 323	42.959	63.161	146.539	1.00	56.37	C
ATOM	2048	CG	GLU B 323	41.903	63.704	145.555	1.00	57.34	C
ATOM	2049	CD	GLU B 323	41.427	62.553	144.690	1.00	58.29	C
ATOM	2050	OE1	GLU B 323	42.238	61.857	144.034	1.00	59.37	O
ATOM	2051	OE2	GLU B 323	40.222	62.286	144.663	1.00	58.17	O
ATOM	2052	N	PRO B 324	43.009	60.136	148.013	1.00	55.05	N
ATOM	2053	CA	PRO B 324	43.797	59.044	148.563	1.00	54.36	C
ATOM	2054	C	PRO B 324	45.142	58.976	147.861	1.00	55.37	C
ATOM	2055	O	PRO B 324	45.401	59.613	146.835	1.00	56.48	O
ATOM	2056	CB	PRO B 324	43.006	57.765	148.252	1.00	53.47	C
ATOM	2057	CG	PRO B 324	42.269	58.183	147.016	1.00	53.95	C

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ATOM 2058 CD PRO B 324	42.056 59.670 146.998 1.00 54.63	C
ATOM 2059 N PRO B 325	46.032 58.173 148.383 1.00 55.73	N
ATOM 2060 CA PRO B 325	47.354 57.952 147.848 1.00 56.79	C
ATOM 2061 C PRO B 325	47.235 57.105 146.593 1.00 58.51	C
ATOM 2062 O PRO B 325	46.186 56.455 146.548 1.00 59.42	O
ATOM 2063 CB PRO B 325	48.084 57.111 148.908 1.00 56.61	C
ATOM 2064 CG PRO B 325	46.945 56.405 149.583 1.00 56.03	C
ATOM 2065 CD PRO B 325	45.784 57.370 149.587 1.00 56.49	C
ATOM 2066 N ILE B 326	48.185 57.070 145.677 1.00 59.89	N
ATOM 2067 CA ILE B 326	48.081 56.220 144.497 1.00 61.78	C
ATOM 2068 C ILE B 326	48.771 54.904 144.848 1.00 60.68	C
ATOM 2069 O ILE B 326	49.919 55.033 145.279 1.00 62.66	O
ATOM 2070 CB ILE B 326	48.774 56.685 143.208 1.00 65.00	C
ATOM 2071 CG1 ILE B 326	50.257 57.062 143.384 1.00 68.09	C
ATOM 2072 CG2 ILE B 326	48.016 57.832 142.521 1.00 64.84	C
ATOM 2073 CD1 ILE B 326	50.668 57.986 144.527 1.00 69.81	C
ATOM 2074 N LEU B 327	48.160 53.747 144.735 1.00 59.06	N
ATOM 2075 CA LEU B 327	48.909 52.546 145.122 1.00 58.44	C
ATOM 2076 C LEU B 327	49.829 52.088 144.008 1.00 58.98	C
ATOM 2077 O LEU B 327	49.826 52.665 142.938 1.00 59.09	O
ATOM 2078 CB LEU B 327	47.876 51.501 145.502 1.00 57.19	C
ATOM 2079 CG LEU B 327	46.808 51.909 146.493 1.00 56.05	C
ATOM 2080 CD1 LEU B 327	46.233 50.637 147.122 1.00 55.97	C
ATOM 2081 CD2 LEU B 327	47.321 52.844 147.568 1.00 55.58	C
ATOM 2082 N TYR B 328	50.628 51.067 144.227 1.00 60.54	N
ATOM 2083 CA TYR B 328	51.514 50.508 143.229 1.00 62.26	C
ATOM 2084 C TYR B 328	51.076 49.047 143.140 1.00 63.10	C
ATOM 2085 O TYR B 328	50.702 48.523 144.172 1.00 62.38	O
ATOM 2086 CB TYR B 328	52.998 50.527 143.560 1.00 63.28	C
ATOM 2087 CG TYR B 328	53.619 51.884 143.281 1.00 64.36	C
ATOM 2088 CD1 TYR B 328	53.626 52.866 144.259 1.00 64.71	C
ATOM 2089 CD2 TYR B 328	54.168 52.171 142.050 1.00 64.48	C
ATOM 2090 CE1 TYR B 328	54.182 54.104 144.018 1.00 65.70	C
ATOM 2091 CE2 TYR B 328	54.716 53.413 141.810 1.00 65.61	C
ATOM 2092 CZ TYR B 328	54.728 54.375 142.788 1.00 66.10	C
ATOM 2093 OH TYR B 328	55.288 55.604 142.502 1.00 67.55	O
ATOM 2094 N SER B 329	51.102 48.465 141.959 1.00 65.42	N
ATOM 2095 CA SER B 329	50.677 47.083 141.860 1.00 67.55	C
ATOM 2096 C SER B 329	51.719 46.193 142.513 1.00 70.65	C
ATOM 2097 O SER B 329	52.883 46.548 142.456 1.00 71.72	O
ATOM 2098 CB SER B 329	50.548 46.669 140.404 1.00 66.96	C
ATOM 2099 OG SER B 329	50.526 45.240 140.433 1.00 67.55	O
ATOM 2100 N GLU B 330	51.326 45.087 143.091 1.00 75.08	N
ATOM 2101 CA GLU B 330	52.235 44.145 143.719 1.00 79.78	C
ATOM 2102 C GLU B 330	53.117 43.539 142.618 1.00 81.27	C

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ATOM 2103 O GLU B 330	52.642 43.193 141.526 1.00 82.31	O
ATOM 2104 CB GLU B 330	51.465 43.052 144.451 1.00 82.94	C
ATOM 2105 CG GLU B 330	51.589 41.643 143.909 1.00 87.97	C
ATOM 2106 CD GLU B 330	50.421 41.080 143.122 1.00 91.03	C
ATOM 2107 OE1 GLU B 330	49.425 40.611 143.749 1.00 91.90	O
ATOM 2108 OE2 GLU B 330	50.493 41.081 141.857 1.00 92.57	O
ATOM 2109 N PHE B 337	51.253 36.811 132.549 1.00 86.18	N
ATOM 2110 CA PHE B 337	49.852 37.145 132.479 1.00 85.96	C
ATOM 2111 C PHE B 337	48.997 36.001 131.933 1.00 85.36	C
ATOM 2112 O PHE B 337	49.190 35.478 130.827 1.00 86.63	O
ATOM 2113 CB PHE B 337	49.503 38.328 131.558 1.00 87.52	C
ATOM 2114 CG PHE B 337	49.859 39.641 132.182 1.00 89.57	C
ATOM 2115 CD1 PHE B 337	49.843 39.761 133.566 1.00 90.51	C
ATOM 2116 CD2 PHE B 337	50.215 40.745 131.415 1.00 90.05	C
ATOM 2117 CE1 PHE B 337	50.181 40.970 134.162 1.00 91.28	C
ATOM 2118 CE2 PHE B 337	50.547 41.952 132.014 1.00 90.08	C
ATOM 2119 CZ PHE B 337	50.530 42.072 133.389 1.00 90.52	C
ATOM 2120 N SER B 338	48.024 35.667 132.756 1.00 82.82	N
ATOM 2121 CA SER B 338	47.075 34.617 132.372 1.00 80.39	C
ATOM 2122 C SER B 338	45.740 35.093 132.927 1.00 78.40	C
ATOM 2123 O SER B 338	45.783 35.839 133.928 1.00 77.87	O
ATOM 2124 CB SER B 338	47.493 33.300 133.019 1.00 80.21	C
ATOM 2125 OG SER B 338	47.758 33.540 134.398 1.00 79.73	O
ATOM 2126 N GLU B 339	44.629 34.666 132.354 1.00 75.87	N
ATOM 2127 CA GLU B 339	43.342 35.081 132.949 1.00 74.09	C
ATOM 2128 C GLU B 339	43.526 35.122 134.469 1.00 72.45	C
ATOM 2129 O GLU B 339	43.440 36.205 135.065 1.00 72.49	O
ATOM 2130 CB GLU B 339	42.301 34.079 132.505 1.00 74.26	C
ATOM 2131 CG GLU B 339	41.030 33.874 133.294 1.00 74.49	C
ATOM 2132 CD GLU B 339	39.898 33.645 132.292 1.00 75.67	C
ATOM 2133 OE1 GLU B 339	39.740 34.445 131.339 1.00 75.56	O
ATOM 2134 OE2 GLU B 339	39.164 32.644 132.444 1.00 76.73	O
ATOM 2135 N ALA B 340	43.858 33.991 135.105 1.00 70.10	N
ATOM 2136 CA ALA B 340	44.067 33.983 136.538 1.00 68.16	C
ATOM 2137 C ALA B 340	45.121 34.958 137.043 1.00 67.65	C
ATOM 2138 O ALA B 340	44.825 35.704 137.990 1.00 67.91	O
ATOM 2139 CB ALA B 340	44.424 32.585 136.991 1.00 67.98	C
ATOM 2140 N SER B 341	46.321 34.993 136.474 1.00 66.66	N
ATOM 2141 CA SER B 341	47.329 35.924 136.982 1.00 65.93	C
ATOM 2142 C SER B 341	46.854 37.355 136.798 1.00 65.12	C
ATOM 2143 O SER B 341	47.080 38.127 137.749 1.00 65.86	O
ATOM 2144 CB SER B 341	48.696 35.668 136.372 1.00 67.56	C
ATOM 2145 OG SER B 341	49.175 36.672 135.498 1.00 70.60	O
ATOM 2146 N MET B 342	46.221 37.699 135.663 1.00 63.28	N
ATOM 2147 CA MET B 342	45.773 39.078 135.485 1.00 61.89	C

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ATOM	2148	C	MET B 342	44.654	39.478	136.444	1.00	60.47	C
ATOM	2149	O	MET B 342	44.752	40.481	137.159	1.00	60.54	O
ATOM	2150	CB	MET B 342	45.270	39.454	134.093	1.00	61.38	C
ATOM	2151	CG	MET B 342	45.272	40.980	134.038	1.00	62.54	C
ATOM	2152	SD	MET B 342	45.488	41.560	132.349	1.00	66.23	S
ATOM	2153	CE	MET B 342	43.946	40.863	131.697	1.00	65.09	C
ATOM	2154	N	MET B 343	43.602	38.664	136.486	1.00	58.53	N
ATOM	2155	CA	MET B 343	42.495	38.932	137.396	1.00	57.10	C
ATOM	2156	C	MET B 343	43.075	39.129	138.794	1.00	57.72	C
ATOM	2157	O	MET B 343	42.704	40.064	139.507	1.00	59.02	O
ATOM	2158	CB	MET B 343	41.513	37.780	137.393	1.00	56.26	C
ATOM	2159	CG	MET B 343	40.589	37.839	136.195	1.00	56.11	C
ATOM	2160	SD	MET B 343	39.684	39.386	136.078	1.00	56.84	S
ATOM	2161	CE	MET B 343	39.101	39.643	137.759	1.00	55.00	C
ATOM	2162	N	GLY B 344	44.036	38.296	139.198	1.00	56.46	N
ATOM	2163	CA	GLY B 344	44.679	38.468	140.491	1.00	54.71	C
ATOM	2164	C	GLY B 344	45.227	39.869	140.678	1.00	53.89	C
ATOM	2165	O	GLY B 344	44.813	40.511	141.639	1.00	53.84	O
ATOM	2166	N	LEU B 345	46.105	40.404	139.838	1.00	54.37	N
ATOM	2167	CA	LEU B 345	46.621	41.760	140.042	1.00	54.09	C
ATOM	2168	C	LEU B 345	45.532	42.824	140.167	1.00	53.00	C
ATOM	2169	O	LEU B 345	45.490	43.579	141.140	1.00	53.38	O
ATOM	2170	CB	LEU B 345	47.408	42.284	138.844	1.00	55.45	C
ATOM	2171	CG	LEU B 345	48.757	41.626	138.559	1.00	57.40	C
ATOM	2172	CD1	LEU B 345	48.684	41.033	137.157	1.00	57.22	C
ATOM	2173	CD2	LEU B 345	49.874	42.651	138.738	1.00	57.21	C
ATOM	2174	N	LEU B 346	44.701	42.843	139.117	1.00	50.42	N
ATOM	2175	CA	LEU B 346	43.595	43.791	139.045	1.00	48.04	C
ATOM	2176	C	LEU B 346	42.754	43.764	140.302	1.00	47.19	C
ATOM	2177	O	LEU B 346	42.509	44.746	141.008	1.00	46.14	O
ATOM	2178	CB	LEU B 346	42.828	43.449	137.782	1.00	47.72	C
ATOM	2179	CG	LEU B 346	43.598	43.886	136.509	1.00	48.42	C
ATOM	2180	CD1	LEU B 346	42.660	43.796	135.311	1.00	48.05	C
ATOM	2181	CD2	LEU B 346	44.224	45.266	136.613	1.00	47.09	C
ATOM	2182	N	THR B 347	42.349	42.553	140.628	1.00	46.25	N
ATOM	2183	CA	THR B 347	41.549	42.288	141.820	1.00	46.10	C
ATOM	2184	C	THR B 347	42.238	42.666	143.100	1.00	47.12	C
ATOM	2185	O	THR B 347	41.675	43.312	144.002	1.00	47.76	O
ATOM	2186	CB	THR B 347	41.162	40.813	141.668	1.00	45.79	C
ATOM	2187	OG1	THR B 347	39.731	40.798	141.443	1.00	47.18	O
ATOM	2188	CG2	THR B 347	41.638	39.936	142.757	1.00	44.47	C
ATOM	2189	N	ASN B 348	43.516	42.349	143.245	1.00	48.37	N
ATOM	2190	CA	ASN B 348	44.312	42.696	144.422	1.00	47.96	C
ATOM	2191	C	ASN B 348	44.383	44.213	144.550	1.00	46.69	C
ATOM	2192	O	ASN B 348	44.120	44.863	145.568	1.00	46.53	O

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ATOM	2193	CB	ASN B 348	45.687	42.077	144.255	1.00	50.12	C
ATOM	2194	CG	ASN B 348	46.646	42.472	145.355	1.00	53.52	C
ATOM	2195	OD1	ASN B 348	47.392	43.475	145.293	1.00	55.04	O
ATOM	2196	ND2	ASN B 348	46.576	41.621	146.382	1.00	54.64	N
ATOM	2197	N	LEU B 349	44.729	44.861	143.440	1.00	45.19	N
ATOM	2198	CA	LEU B 349	44.827	46.327	143.461	1.00	44.31	C
ATOM	2199	C	LEU B 349	43.516	46.920	143.946	1.00	42.73	C
ATOM	2200	O	LEU B 349	43.496	47.803	144.782	1.00	41.58	O
ATOM	2201	CB	LEU B 349	45.260	46.806	142.070	1.00	44.84	C
ATOM	2202	CG	LEU B 349	45.463	48.314	141.897	1.00	45.41	C
ATOM	2203	CD1	LEU B 349	46.548	48.802	142.850	1.00	45.52	C
ATOM	2204	CD2	LEU B 349	45.780	48.735	140.467	1.00	44.75	C
ATOM	2205	N	ALA B 350	42.387	46.437	143.433	1.00	42.61	N
ATOM	2206	CA	ALA B 350	41.064	46.936	143.776	1.00	42.37	C
ATOM	2207	C	ALA B 350	40.836	46.794	145.268	1.00	42.95	C
ATOM	2208	O	ALA B 350	40.543	47.737	146.002	1.00	41.96	O
ATOM	2209	CB	ALA B 350	39.967	46.201	143.010	1.00	41.65	C
ATOM	2210	N	ASP B 351	41.030	45.560	145.745	1.00	44.56	N
ATOM	2211	CA	ASP B 351	40.862	45.330	147.181	1.00	46.40	C
ATOM	2212	C	ASP B 351	41.664	46.319	148.016	1.00	46.43	C
ATOM	2213	O	ASP B 351	41.230	46.750	149.090	1.00	47.39	O
ATOM	2214	CB	ASP B 351	41.238	43.886	147.491	1.00	48.98	C
ATOM	2215	CG	ASP B 351	41.021	43.624	148.973	1.00	51.85	C
ATOM	2216	OD1	ASP B 351	39.868	43.494	149.431	1.00	52.63	O
ATOM	2217	OD2	ASP B 351	42.069	43.568	149.663	1.00	54.48	O
ATOM	2218	N	ARG B 352	42.857	46.724	147.596	1.00	46.00	N
ATOM	2219	CA	ARG B 352	43.654	47.672	148.350	1.00	45.92	C
ATOM	2220	C	ARG B 352	43.139	49.091	148.289	1.00	45.41	C
ATOM	2221	O	ARG B 352	43.092	49.793	149.312	1.00	46.29	O
ATOM	2222	CB	ARG B 352	45.081	47.581	147.832	1.00	46.64	C
ATOM	2223	CG	ARG B 352	45.757	46.326	148.369	1.00	48.12	C
ATOM	2224	CD	ARG B 352	47.240	46.699	148.620	1.00	49.94	C
ATOM	2225	NE	ARG B 352	47.831	46.493	147.298	1.00	52.10	N
ATOM	2226	CZ	ARG B 352	48.655	47.337	146.661	1.00	52.15	C
ATOM	2227	NH1	ARG B 352	49.011	48.472	147.259	1.00	50.48	N
ATOM	2228	NH2	ARG B 352	49.015	46.878	145.451	1.00	51.51	N
ATOM	2229	N	GLU B 353	42.701	49.536	147.119	1.00	44.33	N
ATOM	2230	CA	GLU B 353	42.161	50.889	146.991	1.00	43.49	C
ATOM	2231	C	GLU B 353	40.862	51.033	147.789	1.00	43.42	C
ATOM	2232	O	GLU B 353	40.503	52.128	148.220	1.00	42.92	O
ATOM	2233	CB	GLU B 353	41.848	51.196	145.537	1.00	42.87	C
ATOM	2234	CG	GLU B 353	42.933	50.836	144.558	1.00	43.52	C
ATOM	2235	CD	GLU B 353	42.710	51.456	143.201	1.00	44.16	C
ATOM	2236	OE1	GLU B 353	42.597	52.674	143.043	1.00	43.57	O
ATOM	2237	OE2	GLU B 353	42.628	50.706	142.214	1.00	45.84	O

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ATOM	2238	N	LEU B 354	40.153	49.915	147.992	1.00	42.83	N
ATOM	2239	CA	LEU B 354	38.900	49.915	148.712	1.00	42.73	C
ATOM	2240	C	LEU B 354	39.083	50.455	150.110	1.00	43.31	C
ATOM	2241	O	LEU B 354	38.270	51.257	150.594	1.00	43.47	O
ATOM	2242	CB	LEU B 354	38.210	48.546	148.710	1.00	41.85	C
ATOM	2243	CG	LEU B 354	37.399	48.461	147.392	1.00	41.01	C
ATOM	2244	CD1	LEU B 354	37.232	47.020	147.007	1.00	42.17	C
ATOM	2245	CD2	LEU B 354	36.098	49.201	147.579	1.00	40.64	C
ATOM	2246	N	VAL B 355	40.192	50.012	150.697	1.00	43.66	N
ATOM	2247	CA	VAL B 355	40.513	50.540	152.037	1.00	43.57	C
ATOM	2248	C	VAL B 355	40.640	52.049	151.989	1.00	43.49	C
ATOM	2249	O	VAL B 355	39.931	52.791	152.667	1.00	44.38	O
ATOM	2250	CB	VAL B 355	41.822	49.887	152.485	1.00	42.19	C
ATOM	2251	CG1	VAL B 355	42.185	50.377	153.841	1.00	41.86	C
ATOM	2252	CG2	VAL B 355	41.536	48.388	152.492	1.00	43.55	C
ATOM	2253	N	HIS B 356	41.502	52.573	151.138	1.00	43.64	N
ATOM	2254	CA	HIS B 356	41.663	54.020	151.046	1.00	44.98	C
ATOM	2255	C	HIS B 356	40.354	54.684	150.718	1.00	44.85	C
ATOM	2256	O	HIS B 356	40.075	55.789	151.171	1.00	44.94	O
ATOM	2257	CB	HIS B 356	42.746	54.342	150.000	1.00	48.00	C
ATOM	2258	CG	HIS B 356	44.039	53.806	150.549	1.00	50.79	C
ATOM	2259	ND1	HIS B 356	44.987	54.578	151.156	1.00	51.64	N
ATOM	2260	CD2	HIS B 356	44.492	52.531	150.622	1.00	52.67	C
ATOM	2261	CE1	HIS B 356	45.975	53.804	151.555	1.00	52.82	C
ATOM	2262	NE2	HIS B 356	45.717	52.545	151.255	1.00	53.04	N
ATOM	2263	N	MET B 357	39.527	54.042	149.887	1.00	45.52	N
ATOM	2264	CA	MET B 357	38.258	54.585	149.440	1.00	43.50	C
ATOM	2265	C	MET B 357	37.366	54.938	150.612	1.00	43.20	C
ATOM	2266	O	MET B 357	36.851	56.042	150.626	1.00	44.03	O
ATOM	2267	CB	MET B 357	37.424	53.666	148.547	1.00	42.56	C
ATOM	2268	CG	MET B 357	36.286	54.506	147.943	1.00	42.38	C
ATOM	2269	SD	MET B 357	35.245	53.437	146.919	1.00	43.60	S
ATOM	2270	CE	MET B 357	36.318	53.100	145.547	1.00	42.88	C
ATOM	2271	N	ILE B 358	37.213	53.978	151.513	1.00	42.20	N
ATOM	2272	CA	ILE B 358	36.378	54.184	152.687	1.00	40.88	C
ATOM	2273	C	ILE B 358	36.869	55.416	153.422	1.00	42.97	C
ATOM	2274	O	ILE B 358	36.054	56.284	153.754	1.00	43.92	O
ATOM	2275	CB	ILE B 358	36.483	52.950	153.581	1.00	39.18	C
ATOM	2276	CG1	ILE B 358	35.909	51.759	152.836	1.00	39.34	C
ATOM	2277	CG2	ILE B 358	35.767	53.190	154.879	1.00	39.09	C
ATOM	2278	CD1	ILE B 358	36.019	50.424	153.527	1.00	39.80	C
ATOM	2279	N	ASN B 359	38.174	55.520	153.673	1.00	44.15	N
ATOM	2280	CA	ASN B 359	38.709	56.695	154.338	1.00	45.85	C
ATOM	2281	C	ASN B 359	38.317	57.963	153.628	1.00	44.78	C
ATOM	2282	O	ASN B 359	37.738	58.868	154.190	1.00	45.76	O

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ATOM 2283	CB ASN B 359	40.230 56.589 154.376 1.00 50.87	C
ATOM 2284	CG ASN B 359	40.498 55.579 155.477 1.00 56.26	C
ATOM 2285	OD1 ASN B 359	40.076 55.925 156.602 1.00 61.30	O
ATOM 2286	ND2 ASN B 359	41.104 54.423 155.259 1.00 57.59	N
ATOM 2287	N TRP B 360	38.598 58.043 152.346 1.00 44.00	N
ATOM 2288	CA TRP B 360	38.268 59.171 151.512 1.00 42.58	C
ATOM 2289	C TRP B 360	36.806 59.546 151.631 1.00 42.49	C
ATOM 2290	O TRP B 360	36.410 60.691 151.727 1.00 42.71	O
ATOM 2291	CB TRP B 360	38.544 58.717 150.069 1.00 42.21	C
ATOM 2292	CG TRP B 360	37.881 59.662 149.097 1.00 42.64	C
ATOM 2293	CD1 TRP B 360	38.328 60.905 148.764 1.00 42.29	C
ATOM 2294	CD2 TRP B 360	36.667 59.443 148.365 1.00 42.41	C
ATOM 2295	NE1 TRP B 360	37.449 61.447 147.877 1.00 43.09	N
ATOM 2296	CE2 TRP B 360	36.430 60.586 147.599 1.00 42.27	C
ATOM 2297	CE3 TRP B 360	35.760 58.378 148.288 1.00 42.53	C
ATOM 2298	CZ2 TRP B 360	35.342 60.733 146.752 1.00 42.40	C
ATOM 2299	CZ3 TRP B 360	34.674 58.519 147.451 1.00 43.36	C
ATOM 2300	CH2 TRP B 360	34.462 59.688 146.688 1.00 43.36	C
ATOM 2301	N ALA B 361	35.898 58.584 151.574 1.00 44.00	N
ATOM 2302	CA ALA B 361	34.467 58.839 151.658 1.00 45.18	C
ATOM 2303	C ALA B 361	34.177 59.629 152.930 1.00 46.34	C
ATOM 2304	O ALA B 361	33.398 60.572 152.903 1.00 45.79	O
ATOM 2305	CB ALA B 361	33.690 57.534 151.609 1.00 44.61	C
ATOM 2306	N LYS B 362	34.804 59.320 154.051 1.00 48.42	N
ATOM 2307	CA LYS B 362	34.581 60.009 155.298 1.00 51.41	C
ATOM 2308	C LYS B 362	34.844 61.494 155.237 1.00 51.60	C
ATOM 2309	O LYS B 362	34.262 62.243 156.028 1.00 52.45	O
ATOM 2310	CB LYS B 362	35.368 59.329 156.429 1.00 53.83	C
ATOM 2311	CG LYS B 362	34.783 57.948 156.761 1.00 56.54	C
ATOM 2312	CD LYS B 362	33.429 58.076 157.442 1.00 58.88	C
ATOM 2313	CE LYS B 362	33.243 57.135 158.619 1.00 60.68	C
ATOM 2314	NZ LYS B 362	32.112 57.527 159.530 1.00 61.36	N
ATOM 2315	N ARG B 363	35.659 61.990 154.354 1.00 51.98	N
ATOM 2316	CA ARG B 363	35.974 63.383 154.183 1.00 53.74	C
ATOM 2317	C ARG B 363	35.176 64.086 153.096 1.00 52.36	C
ATOM 2318	O ARG B 363	35.421 65.265 152.810 1.00 53.34	O
ATOM 2319	CB ARG B 363	37.445 63.546 153.759 1.00 57.28	C
ATOM 2320	CG ARG B 363	38.196 62.254 153.990 1.00 63.66	C
ATOM 2321	CD ARG B 363	38.649 62.308 155.471 1.00 69.44	C
ATOM 2322	NE ARG B 363	39.675 63.365 155.438 1.00 74.98	N
ATOM 2323	CZ ARG B 363	40.834 63.136 154.780 1.00 78.56	C
ATOM 2324	NH1 ARG B 363	41.049 61.949 154.177 1.00 79.07	N
ATOM 2325	NH2 ARG B 363	41.730 64.142 154.772 1.00 80.01	N
ATOM 2326	N VAL B 364	34.268 63.458 152.393 1.00 50.64	N
ATOM 2327	CA VAL B 364	33.536 64.203 151.351 1.00 48.57	C

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ATOM	2328	C	VAL B 364	32.516	64.992	152.132	1.00	48.30	C
ATOM	2329	O	VAL B 364	31.679	64.424	152.834	1.00	49.68	O
ATOM	2330	CB	VAL B 364	32.933	63.200	150.360	1.00	47.31	C
ATOM	2331	CG1	VAL B 364	31.906	63.840	149.457	1.00	46.60	C
ATOM	2332	CG2	VAL B 364	34.069	62.557	149.571	1.00	46.35	C
ATOM	2333	N	PRO B 365	32.542	66.287	152.091	1.00	47.88	N
ATOM	2334	CA	PRO B 365	31.625	67.148	152.817	1.00	47.75	C
ATOM	2335	C	PRO B 365	30.208	66.645	152.701	1.00	47.86	C
ATOM	2336	O	PRO B 365	29.722	66.392	151.609	1.00	48.96	O
ATOM	2337	CB	PRO B 365	31.788	68.552	152.204	1.00	47.58	C
ATOM	2338	CG	PRO B 365	33.260	68.466	151.902	1.00	49.17	C
ATOM	2339	CD	PRO B 365	33.509	67.057	151.312	1.00	48.98	C
ATOM	2340	N	GLY B 366	29.537	66.463	153.821	1.00	48.34	N
ATOM	2341	CA	GLY B 366	28.168	66.023	153.933	1.00	48.09	C
ATOM	2342	C	GLY B 366	27.949	64.535	154.121	1.00	47.88	C
ATOM	2343	O	GLY B 366	26.864	64.089	154.545	1.00	48.29	O
ATOM	2344	N	PHE B 367	28.970	63.754	153.775	1.00	46.58	N
ATOM	2345	CA	PHE B 367	28.849	62.306	153.856	1.00	46.69	C
ATOM	2346	C	PHE B 367	28.516	61.780	155.244	1.00	46.32	C
ATOM	2347	O	PHE B 367	27.608	61.036	155.593	1.00	44.65	O
ATOM	2348	CB	PHE B 367	30.145	61.654	153.357	1.00	45.74	C
ATOM	2349	CG	PHE B 367	30.040	60.160	153.204	1.00	45.19	C
ATOM	2350	CD1	PHE B 367	29.373	59.598	152.150	1.00	44.90	C
ATOM	2351	CD2	PHE B 367	30.613	59.325	154.144	1.00	45.86	C
ATOM	2352	CE1	PHE B 367	29.287	58.234	152.008	1.00	46.05	C
ATOM	2353	CE2	PHE B 367	30.537	57.958	154.029	1.00	46.38	C
ATOM	2354	CZ	PHE B 367	29.875	57.405	152.947	1.00	46.68	C
ATOM	2355	N	VAL B 368	29.358	62.254	156.134	1.00	47.15	N
ATOM	2356	CA	VAL B 368	29.376	61.923	157.550	1.00	48.33	C
ATOM	2357	C	VAL B 368	28.103	62.324	158.245	1.00	49.61	C
ATOM	2358	O	VAL B 368	27.813	61.753	159.307	1.00	51.30	O
ATOM	2359	CB	VAL B 368	30.647	62.529	158.162	1.00	47.39	C
ATOM	2360	CG1	VAL B 368	30.341	63.282	159.413	1.00	47.29	C
ATOM	2361	CG2	VAL B 368	31.671	61.416	158.296	1.00	46.89	C
ATOM	2362	N	ASP B 369	27.323	63.233	157.685	1.00	50.09	N
ATOM	2363	CA	ASP B 369	26.035	63.587	158.254	1.00	50.46	C
ATOM	2364	C	ASP B 369	25.034	62.476	157.971	1.00	48.55	C
ATOM	2365	O	ASP B 369	23.922	62.589	158.461	1.00	50.33	O
ATOM	2366	CB	ASP B 369	25.475	64.892	157.668	1.00	53.89	C
ATOM	2367	CG	ASP B 369	26.430	66.074	157.769	1.00	58.03	C
ATOM	2368	OD1	ASP B 369	27.112	66.330	158.802	1.00	59.26	O
ATOM	2369	OD2	ASP B 369	26.554	66.855	156.780	1.00	59.49	O
ATOM	2370	N	LEU B 370	25.222	61.420	157.221	1.00	47.05	N
ATOM	2371	CA	LEU B 370	24.202	60.401	156.985	1.00	45.34	C
ATOM	2372	C	LEU B 370	24.280	59.335	158.062	1.00	43.86	C

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ATOM	2373	O	LEU B 370	25.306	59.324	158.740	1.00	44.04	O
ATOM	2374	CB	LEU B 370	24.463	59.767	155.612	1.00	46.15	C
ATOM	2375	CG	LEU B 370	24.312	60.763	154.454	1.00	46.82	C
ATOM	2376	CD1	LEU B 370	24.605	60.125	153.107	1.00	46.43	C
ATOM	2377	CD2	LEU B 370	22.869	61.283	154.518	1.00	46.50	C
ATOM	2378	N	THR B 371	23.292	58.494	158.263	1.00	41.90	N
ATOM	2379	CA	THR B 371	23.420	57.495	159.308	1.00	42.13	C
ATOM	2380	C	THR B 371	24.521	56.534	158.912	1.00	43.67	C
ATOM	2381	O	THR B 371	24.823	56.337	157.727	1.00	44.74	O
ATOM	2382	CB	THR B 371	22.120	56.701	159.395	1.00	42.81	C
ATOM	2383	OG1	THR B 371	21.749	56.371	158.054	1.00	44.14	O
ATOM	2384	CG2	THR B 371	20.990	57.552	159.918	1.00	43.46	C
ATOM	2385	N	LEU B 372	25.132	55.886	159.899	1.00	44.52	N
ATOM	2386	CA	LEU B 372	26.204	54.944	159.612	1.00	44.27	C
ATOM	2387	C	LEU B 372	25.785	53.935	158.562	1.00	45.75	C
ATOM	2388	O	LEU B 372	26.637	53.676	157.691	1.00	46.87	O
ATOM	2389	CB	LEU B 372	26.618	54.282	160.915	1.00	43.07	C
ATOM	2390	CG	LEU B 372	27.311	55.225	161.889	1.00	42.80	C
ATOM	2391	CD1	LEU B 372	27.664	54.482	163.168	1.00	43.31	C
ATOM	2392	CD2	LEU B 372	28.594	55.751	161.277	1.00	43.66	C
ATOM	2393	N	HIS B 373	24.566	53.395	158.585	1.00	45.98	N
ATOM	2394	CA	HIS B 373	24.203	52.417	157.564	1.00	47.04	C
ATOM	2395	C	HIS B 373	24.055	53.084	156.212	1.00	46.53	C
ATOM	2396	O	HIS B 373	24.487	52.447	155.220	1.00	47.00	O
ATOM	2397	CB	HIS B 373	23.005	51.585	157.954	1.00	49.76	C
ATOM	2398	CG	HIS B 373	23.350	50.587	159.002	1.00	53.39	C
ATOM	2399	ND1	HIS B 373	23.065	50.720	160.354	1.00	55.19	N
ATOM	2400	CD2	HIS B 373	23.978	49.400	158.890	1.00	54.94	C
ATOM	2401	CE1	HIS B 373	23.503	49.646	161.009	1.00	55.80	C
ATOM	2402	NE2	HIS B 373	24.083	48.817	160.140	1.00	56.63	N
ATOM	2403	N	ASP B 374	23.537	54.308	156.149	1.00	44.27	N
ATOM	2404	CA	ASP B 374	23.478	54.919	154.815	1.00	44.35	C
ATOM	2405	C	ASP B 374	24.846	55.118	154.197	1.00	43.97	C
ATOM	2406	O	ASP B 374	24.956	54.968	152.974	1.00	43.72	O
ATOM	2407	CB	ASP B 374	22.649	56.199	154.851	1.00	45.59	C
ATOM	2408	CG	ASP B 374	21.223	55.703	155.009	1.00	48.08	C
ATOM	2409	OD1	ASP B 374	21.024	54.468	154.829	1.00	49.35	O
ATOM	2410	OD2	ASP B 374	20.292	56.479	155.299	1.00	49.88	O
ATOM	2411	N	GLN B 375	25.862	55.435	155.001	1.00	43.23	N
ATOM	2412	CA	GLN B 375	27.195	55.584	154.434	1.00	43.62	C
ATOM	2413	C	GLN B 375	27.589	54.230	153.874	1.00	44.32	C
ATOM	2414	O	GLN B 375	27.950	54.150	152.690	1.00	46.72	O
ATOM	2415	CB	GLN B 375	28.180	56.051	155.476	1.00	44.31	C
ATOM	2416	CG	GLN B 375	27.735	57.373	156.082	1.00	46.41	C
ATOM	2417	CD	GLN B 375	28.564	57.807	157.274	1.00	46.26	C

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ATOM	2418	OE1 GLN B 375	29.742	57.477	157.379	1.00	47.15	O
ATOM	2419	NE2 GLN B 375	27.931	58.543	158.158	1.00	45.51	N
ATOM	2420	N VAL B 376	27.483	53.136	154.625	1.00	42.98	N
ATOM	2421	CA VAL B 376	27.843	51.849	154.027	1.00	42.65	C
ATOM	2422	C VAL B 376	27.054	51.662	152.740	1.00	43.08	C
ATOM	2423	O VAL B 376	27.611	51.284	151.714	1.00	43.58	O
ATOM	2424	CB VAL B 376	27.640	50.677	154.989	1.00	42.62	C
ATOM	2425	CG1 VAL B 376	28.412	49.481	154.467	1.00	42.57	C
ATOM	2426	CG2 VAL B 376	28.137	51.017	156.375	1.00	41.75	C
ATOM	2427	N HIS B 377	25.753	51.934	152.711	1.00	44.02	N
ATOM	2428	CA HIS B 377	24.981	51.805	151.468	1.00	44.64	C
ATOM	2429	C HIS B 377	25.600	52.635	150.364	1.00	43.12	C
ATOM	2430	O HIS B 377	26.019	51.995	149.384	1.00	43.78	O
ATOM	2431	CB HIS B 377	23.497	52.076	151.711	1.00	46.21	C
ATOM	2432	CG AHIS B 377	22.607	52.039	150.512	0.50	44.35	C
ATOM	2433	CG BHIS B 377	22.947	50.949	152.558	0.50	50.29	C
ATOM	2434	ND1AHIS B 377	22.247	50.853	149.916	0.50	43.89	N
ATOM	2435	ND1BHIS B 377	22.350	51.163	153.793	0.50	51.12	N
ATOM	2436	CD2AHIS B 377	22.003	53.020	149.793	0.50	44.38	C
ATOM	2437	CD2BHIS B 377	22.919	49.600	152.345	0.50	51.17	C
ATOM	2438	CE1AHIS B 377	21.466	51.118	148.877	0.50	43.90	C
ATOM	2439	CE1BHIS B 377	21.965	50.003	154.308	0.50	51.18	C
ATOM	2440	NE2AHIS B 377	21.304	52.423	148.768	0.50	43.73	N
ATOM	2441	NE2BHIS B 377	22.299	49.039	153.458	0.50	51.65	N
ATOM	2442	N LEU B 378	25.768	53.948	150.396	1.00	41.23	N
ATOM	2443	CA LEU B 378	26.408	54.598	149.239	1.00	40.29	C
ATOM	2444	C LEU B 378	27.727	53.934	148.847	1.00	39.27	C
ATOM	2445	O LEU B 378	28.095	53.717	147.675	1.00	37.62	O
ATOM	2446	CB LEU B 378	26.539	56.096	149.487	1.00	40.75	C
ATOM	2447	CG LEU B 378	25.290	56.820	149.987	1.00	40.78	C
ATOM	2448	CD1 LEU B 378	25.562	58.302	150.166	1.00	40.54	C
ATOM	2449	CD2 LEU B 378	24.139	56.634	149.024	1.00	40.52	C
ATOM	2450	N LEU B 379	28.540	53.551	149.829	1.00	38.80	N
ATOM	2451	CA LEU B 379	29.812	52.924	149.510	1.00	38.53	C
ATOM	2452	C LEU B 379	29.569	51.668	148.715	1.00	39.41	C
ATOM	2453	O LEU B 379	30.062	51.582	147.601	1.00	39.29	O
ATOM	2454	CB LEU B 379	30.626	52.631	150.754	1.00	37.75	C
ATOM	2455	CG LEU B 379	31.544	53.840	151.017	1.00	38.48	C
ATOM	2456	CD1 LEU B 379	32.100	53.599	152.411	1.00	40.54	C
ATOM	2457	CD2 LEU B 379	32.609	54.029	149.951	1.00	36.12	C
ATOM	2458	N GLU B 380	28.775	50.744	149.280	1.00	40.40	N
ATOM	2459	CA GLU B 380	28.481	49.507	148.576	1.00	40.60	C
ATOM	2460	C GLU B 380	27.932	49.823	147.180	1.00	42.38	C
ATOM	2461	O GLU B 380	28.273	49.192	146.186	1.00	41.89	O
ATOM	2462	CB GLU B 380	27.496	48.721	149.377	1.00	39.04	C

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ATOM	2463	CG	GLU B 380	28.010	48.175	150.668	1.00	43.02	C
ATOM	2464	CD	GLU B 380	26.849	47.489	151.386	1.00	46.45	C
ATOM	2465	OE1	GLU B 380	25.689	47.970	151.219	1.00	48.79	O
ATOM	2466	OE2	GLU B 380	27.057	46.480	152.108	1.00	47.08	O
ATOM	2467	N	CYS B 381	27.068	50.823	147.051	1.00	44.02	N
ATOM	2468	CA	CYS B 381	26.504	51.108	145.760	1.00	46.42	C
ATOM	2469	C	CYS B 381	27.499	51.631	144.755	1.00	44.27	C
ATOM	2470	O	CYS B 381	27.485	51.113	143.630	1.00	42.52	O
ATOM	2471	CB	CYS B 381	25.216	51.950	145.913	1.00	50.98	C
ATOM	2472	SG	CYS B 381	23.759	50.890	145.506	1.00	62.03	S
ATOM	2473	N	ALA B 382	28.335	52.615	145.072	1.00	42.25	N
ATOM	2474	CA	ALA B 382	29.254	53.184	144.104	1.00	39.67	C
ATOM	2475	C	ALA B 382	30.697	52.743	144.082	1.00	39.72	C
ATOM	2476	O	ALA B 382	31.482	53.339	143.340	1.00	39.67	O
ATOM	2477	CB	ALA B 382	29.325	54.671	144.482	1.00	38.16	C
ATOM	2478	N	TRP B 383	31.121	51.713	144.797	1.00	39.88	N
ATOM	2479	CA	TRP B 383	32.543	51.357	144.827	1.00	39.09	C
ATOM	2480	C	TRP B 383	33.224	51.210	143.495	1.00	39.22	C
ATOM	2481	O	TRP B 383	34.192	51.900	143.161	1.00	39.38	O
ATOM	2482	CB	TRP B 383	32.724	50.169	145.722	1.00	38.40	C
ATOM	2483	CG	TRP B 383	32.290	48.861	145.180	1.00	37.57	C
ATOM	2484	CD1	TRP B 383	31.075	48.274	145.280	1.00	37.22	C
ATOM	2485	CD2	TRP B 383	33.137	47.963	144.457	1.00	37.68	C
ATOM	2486	NE1	TRP B 383	31.107	47.058	144.650	1.00	37.31	N
ATOM	2487	CE2	TRP B 383	32.354	46.839	144.130	1.00	37.64	C
ATOM	2488	CE3	TRP B 383	34.470	48.015	144.037	1.00	37.73	C
ATOM	2489	CZ2	TRP B 383	32.871	45.765	143.407	1.00	37.19	C
ATOM	2490	CZ3	TRP B 383	34.977	46.951	143.322	1.00	37.29	C
ATOM	2491	CH2	TRP B 383	34.176	45.848	143.018	1.00	37.25	C
ATOM	2492	N	LEU B 384	32.696	50.331	142.654	1.00	39.35	N
ATOM	2493	CA	LEU B 384	33.261	50.123	141.319	1.00	36.53	C
ATOM	2494	C	LEU B 384	33.116	51.359	140.460	1.00	36.16	C
ATOM	2495	O	LEU B 384	34.014	51.594	139.658	1.00	35.72	O
ATOM	2496	CB	LEU B 384	32.663	48.874	140.721	1.00	35.23	C
ATOM	2497	CG	LEU B 384	33.253	48.454	139.396	1.00	36.60	C
ATOM	2498	CD1	LEU B 384	34.772	48.345	139.412	1.00	36.92	C
ATOM	2499	CD2	LEU B 384	32.657	47.092	139.012	1.00	37.73	C
ATOM	2500	N	GLU B 385	32.061	52.175	140.590	1.00	36.92	N
ATOM	2501	CA	GLU B 385	31.952	53.382	139.753	1.00	37.16	C
ATOM	2502	C	GLU B 385	33.129	54.283	140.148	1.00	36.25	C
ATOM	2503	O	GLU B 385	33.795	54.750	139.236	1.00	34.66	O
ATOM	2504	CB	GLU B 385	30.637	54.128	139.876	1.00	37.88	C
ATOM	2505	CG	GLU B 385	29.493	53.756	138.966	1.00	39.57	C
ATOM	2506	CD	GLU B 385	28.199	54.483	139.316	1.00	42.23	C
ATOM	2507	OE1	GLU B 385	27.562	54.059	140.332	1.00	42.16	O

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ATOM	2508	OE2 GLU B 385	27.782	55.465	138.609	1.00	43.69	O
ATOM	2509	N ILE B 386	33.352	54.447	141.461	1.00	36.36	N
ATOM	2510	CA ILE B 386	34.451	55.261	141.945	1.00	37.19	C
ATOM	2511	C ILE B 386	35.789	54.720	141.414	1.00	37.71	C
ATOM	2512	O ILE B 386	36.546	55.501	140.817	1.00	36.90	O
ATOM	2513	CB ILE B 386	34.645	55.361	143.455	1.00	37.43	C
ATOM	2514	CG1 ILE B 386	33.382	55.630	144.240	1.00	39.88	C
ATOM	2515	CG2 ILE B 386	35.634	56.462	143.765	1.00	36.99	C
ATOM	2516	CD1 ILE B 386	32.672	56.921	143.933	1.00	41.15	C
ATOM	2517	N LEU B 387	36.060	53.423	141.602	1.00	37.58	N
ATOM	2518	CA LEU B 387	37.306	52.866	141.102	1.00	38.24	C
ATOM	2519	C LEU B 387	37.474	53.113	139.601	1.00	39.21	C
ATOM	2520	O LEU B 387	38.582	53.432	139.162	1.00	40.64	O
ATOM	2521	CB LEU B 387	37.438	51.357	141.255	1.00	38.20	C
ATOM	2522	CG LEU B 387	37.692	50.790	142.649	1.00	38.34	C
ATOM	2523	CD1 LEU B 387	37.643	49.271	142.608	1.00	37.67	C
ATOM	2524	CD2 LEU B 387	39.021	51.311	143.173	1.00	38.66	C
ATOM	2525	N MET B 388	36.405	52.962	138.815	1.00	39.11	N
ATOM	2526	CA MET B 388	36.503	53.166	137.381	1.00	37.80	C
ATOM	2527	C MET B 388	36.748	54.614	137.027	1.00	37.69	C
ATOM	2528	O MET B 388	37.600	54.815	136.167	1.00	37.91	O
ATOM	2529	CB MET B 388	35.309	52.641	136.601	1.00	37.03	C
ATOM	2530	CG MET B 388	34.931	51.198	136.866	1.00	37.83	C
ATOM	2531	SD MET B 388	33.953	50.509	135.536	1.00	40.19	S
ATOM	2532	CE MET B 388	33.971	48.765	135.794	1.00	38.82	C
ATOM	2533	N ILE B 389	36.104	55.597	137.643	1.00	38.68	N
ATOM	2534	CA ILE B 389	36.407	56.973	137.194	1.00	39.99	C
ATOM	2535	C ILE B 389	37.852	57.311	137.529	1.00	41.00	C
ATOM	2536	O ILE B 389	38.556	58.002	136.800	1.00	41.50	O
ATOM	2537	CB ILE B 389	35.399	57.998	137.723	1.00	38.80	C
ATOM	2538	CG1 ILE B 389	35.616	59.387	137.127	1.00	38.04	C
ATOM	2539	CG2 ILE B 389	35.499	58.074	139.230	1.00	38.43	C
ATOM	2540	CD1 ILE B 389	34.371	60.249	137.198	1.00	37.00	C
ATOM	2541	N GLY B 390	38.360	56.778	138.629	1.00	41.85	N
ATOM	2542	CA GLY B 390	39.739	57.039	139.007	1.00	43.61	C
ATOM	2543	C GLY B 390	40.671	56.515	137.914	1.00	44.49	C
ATOM	2544	O GLY B 390	41.563	57.248	137.453	1.00	44.84	O
ATOM	2545	N LEU B 391	40.437	55.247	137.542	1.00	43.58	N
ATOM	2546	CA LEU B 391	41.278	54.649	136.503	1.00	42.72	C
ATOM	2547	C LEU B 391	41.281	55.524	135.266	1.00	43.00	C
ATOM	2548	O LEU B 391	42.277	55.979	134.733	1.00	42.87	O
ATOM	2549	CB LEU B 391	40.739	53.275	136.131	1.00	42.28	C
ATOM	2550	CG LEU B 391	41.364	52.583	134.924	1.00	42.42	C
ATOM	2551	CD1 LEU B 391	42.857	52.420	135.123	1.00	42.93	C
ATOM	2552	CD2 LEU B 391	40.780	51.204	134.661	1.00	42.70	C

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ATOM	2553	N	VAL B 392	40.083	55.797	134.767	1.00	44.30	N
ATOM	2554	CA	VAL B 392	39.888	56.599	133.564	1.00	44.62	C
ATOM	2555	C	VAL B 392	40.696	57.890	133.661	1.00	45.80	C
ATOM	2556	O	VAL B 392	41.483	58.277	132.782	1.00	46.09	O
ATOM	2557	CB	VAL B 392	38.385	56.870	133.329	1.00	42.95	C
ATOM	2558	CG1	VAL B 392	38.164	57.928	132.274	1.00	42.03	C
ATOM	2559	CG2	VAL B 392	37.697	55.589	132.880	1.00	41.82	C
ATOM	2560	N	TRP B 393	40.489	58.565	134.786	1.00	46.23	N
ATOM	2561	CA	TRP B 393	41.156	59.836	135.033	1.00	47.70	C
ATOM	2562	C	TRP B 393	42.668	59.730	135.000	1.00	48.44	C
ATOM	2563	O	TRP B 393	43.349	60.532	134.370	1.00	50.15	O
ATOM	2564	CB	TRP B 393	40.728	60.368	136.388	1.00	47.66	C
ATOM	2565	CG	TRP B 393	41.645	61.406	136.931	1.00	48.86	C
ATOM	2566	CD1	TRP B 393	42.529	61.268	137.963	1.00	49.10	C
ATOM	2567	CD2	TRP B 393	41.793	62.749	136.452	1.00	49.37	C
ATOM	2568	NE1	TRP B 393	43.196	62.453	138.162	1.00	48.69	N
ATOM	2569	CE2	TRP B 393	42.762	63.374	137.260	1.00	48.40	C
ATOM	2570	CE3	TRP B 393	41.179	63.478	135.425	1.00	49.82	C
ATOM	2571	CZ2	TRP B 393	43.122	64.691	137.078	1.00	48.39	C
ATOM	2572	CZ3	TRP B 393	41.546	64.799	135.246	1.00	49.75	C
ATOM	2573	CH2	TRP B 393	42.503	65.383	136.081	1.00	49.28	C
ATOM	2574	N	ARG B 394	43.221	58.741	135.690	1.00	48.15	N
ATOM	2575	CA	ARG B 394	44.665	58.624	135.677	1.00	48.22	C
ATOM	2576	C	ARG B 394	45.114	58.067	134.345	1.00	49.34	C
ATOM	2577	O	ARG B 394	46.307	58.107	134.051	1.00	50.97	O
ATOM	2578	CB	ARG B 394	45.277	57.829	136.820	1.00	47.90	C
ATOM	2579	CG	ARG B 394	44.677	56.582	137.366	1.00	46.59	C
ATOM	2580	CD	ARG B 394	45.468	56.021	138.547	1.00	45.18	C
ATOM	2581	NE	ARG B 394	45.074	54.602	138.668	1.00	46.07	N
ATOM	2582	CZ	ARG B 394	43.930	54.222	139.261	1.00	46.64	C
ATOM	2583	NH1	ARG B 394	43.142	55.189	139.769	1.00	46.63	N
ATOM	2584	NH2	ARG B 394	43.605	52.934	139.334	1.00	45.08	N
ATOM	2585	N	SER B 395	44.231	57.530	133.519	1.00	50.71	N
ATOM	2586	CA	SER B 395	44.647	56.956	132.249	1.00	51.33	C
ATOM	2587	C	SER B 395	44.612	57.948	131.116	1.00	53.69	C
ATOM	2588	O	SER B 395	45.009	57.595	130.014	1.00	52.96	O
ATOM	2589	CB	SER B 395	43.671	55.822	131.926	1.00	50.07	C
ATOM	2590	OG	SER B 395	44.140	54.648	132.551	1.00	50.14	O
ATOM	2591	N	MET B 396	44.095	59.141	131.377	1.00	57.28	N
ATOM	2592	CA	MET B 396	43.935	60.187	130.401	1.00	60.41	C
ATOM	2593	C	MET B 396	45.075	60.457	129.431	1.00	63.46	C
ATOM	2594	O	MET B 396	44.857	60.432	128.205	1.00	63.38	O
ATOM	2595	CB	MET B 396	43.710	61.506	131.146	1.00	60.26	C
ATOM	2596	CG	MET B 396	42.519	62.275	130.599	1.00	61.44	C
ATOM	2597	SD	MET B 396	41.916	63.340	131.936	1.00	63.26	S

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ATOM 2598	CE MET B 396	42.092 64.928 131.150 1.00 63.32	C
ATOM 2599	N GLU B 397	46.269 60.729 129.980 1.00 65.76	N
ATOM 2600	CA GLU B 397	47.405 61.033 129.138 1.00 68.66	C
ATOM 2601	C GLU B 397	48.127 59.824 128.639 1.00 67.15	C
ATOM 2602	O GLU B 397	49.341 59.857 128.451 1.00 68.54	O
ATOM 2603	CB GLU B 397	48.455 61.883 129.846 1.00 74.19	C
ATOM 2604	CG GLU B 397	47.902 63.090 130.581 1.00 81.83	C
ATOM 2605	CD GLU B 397	47.274 62.607 131.891 1.00 86.58	C
ATOM 2606	OE1 GLU B 397	47.662 61.462 132.279 1.00 87.97	O
ATOM 2607	OE2 GLU B 397	46.420 63.332 132.488 1.00 89.52	O
ATOM 2608	N HIS B 398	47.570 58.658 128.443 1.00 65.63	N
ATOM 2609	CA HIS B 398	48.211 57.461 127.941 1.00 64.09	C
ATOM 2610	C HIS B 398	47.197 56.851 126.970 1.00 62.84	C
ATOM 2611	O HIS B 398	46.614 55.825 127.278 1.00 62.96	O
ATOM 2612	CB HIS B 398	48.584 56.429 128.983 1.00 65.04	C
ATOM 2613	CG HIS B 398	49.573 56.912 129.992 1.00 66.53	C
ATOM 2614	ND1 HIS B 398	49.334 58.079 130.682 1.00 67.12	N
ATOM 2615	CD2 HIS B 398	50.750 56.456 130.455 1.00 67.25	C
ATOM 2616	CE1 HIS B 398	50.288 58.363 131.527 1.00 68.05	C
ATOM 2617	NE2 HIS B 398	51.161 57.376 131.402 1.00 68.83	N
ATOM 2618	N PRO B 399	46.994 57.547 125.863 1.00 61.30	N
ATOM 2619	CA PRO B 399	46.052 57.186 124.832 1.00 59.65	C
ATOM 2620	C PRO B 399	46.182 55.730 124.502 1.00 59.64	C
ATOM 2621	O PRO B 399	47.297 55.215 124.385 1.00 61.33	O
ATOM 2622	CB PRO B 399	46.421 57.995 123.587 1.00 59.91	C
ATOM 2623	CG PRO B 399	47.011 59.217 124.246 1.00 60.94	C
ATOM 2624	CD PRO B 399	47.706 58.775 125.500 1.00 60.85	C
ATOM 2625	N GLY B 400	45.074 55.025 124.399 1.00 58.97	N
ATOM 2626	CA GLY B 400	45.130 53.608 124.074 1.00 58.35	C
ATOM 2627	C GLY B 400	45.542 52.704 125.217 1.00 57.83	C
ATOM 2628	O GLY B 400	45.492 51.471 125.033 1.00 58.86	O
ATOM 2629	N LYS B 401	45.915 53.242 126.369 1.00 56.30	N
ATOM 2630	CA LYS B 401	46.304 52.433 127.494 1.00 55.69	C
ATOM 2631	C LYS B 401	45.550 52.773 128.782 1.00 53.97	C
ATOM 2632	O LYS B 401	44.950 53.834 128.945 1.00 53.24	O
ATOM 2633	CB LYS B 401	47.760 52.670 127.822 1.00 58.12	C
ATOM 2634	CG LYS B 401	48.775 52.737 126.722 1.00 61.08	C
ATOM 2635	CD LYS B 401	49.742 51.563 126.877 1.00 64.21	C
ATOM 2636	CE LYS B 401	50.482 51.307 125.564 1.00 66.02	C
ATOM 2637	NZ LYS B 401	51.024 52.633 125.124 1.00 67.99	N
ATOM 2638	N LEU B 402	45.640 51.805 129.691 1.00 51.90	N
ATOM 2639	CA LEU B 402	45.012 51.988 130.990 1.00 51.47	C
ATOM 2640	C LEU B 402	46.091 51.851 132.079 1.00 51.01	C
ATOM 2641	O LEU B 402	46.703 50.795 132.242 1.00 50.99	O
ATOM 2642	CB LEU B 402	43.866 51.034 131.283 1.00 50.72	C

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ATOM	2643	CG LEU B 402	42.665	51.047	130.345	1.00	50.65	C
ATOM	2644	CD1 LEU B 402	41.818	49.791	130.586	1.00	51.08	C
ATOM	2645	CD2 LEU B 402	41.830	52.300	130.522	1.00	49.10	C
ATOM	2646	N LEU B 403	46.285	52.928	132.827	1.00	49.42	N
ATOM	2647	CA LEU B 403	47.230	52.971	133.906	1.00	48.91	C
ATOM	2648	C LEU B 403	46.653	52.489	135.221	1.00	48.89	C
ATOM	2649	O LEU B 403	46.344	53.335	136.081	1.00	49.61	O
ATOM	2650	CB LEU B 403	47.635	54.452	134.090	1.00	50.09	C
ATOM	2651	CG LEU B 403	48.949	54.589	134.873	1.00	50.88	C
ATOM	2652	CD1 LEU B 403	50.141	54.474	133.943	1.00	50.73	C
ATOM	2653	CD2 LEU B 403	48.971	55.896	135.626	1.00	51.49	C
ATOM	2654	N PHE B 404	46.515	51.182	135.453	1.00	48.07	N
ATOM	2655	CA PHE B 404	45.970	50.750	136.745	1.00	48.28	C
ATOM	2656	C PHE B 404	46.818	51.327	137.861	1.00	49.45	C
ATOM	2657	O PHE B 404	46.299	51.826	138.854	1.00	50.59	O
ATOM	2658	CB PHE B 404	45.845	49.232	136.911	1.00	47.54	C
ATOM	2659	CG PHE B 404	44.705	48.761	136.042	1.00	47.17	C
ATOM	2660	CD1 PHE B 404	44.918	48.494	134.696	1.00	47.57	C
ATOM	2661	CD2 PHE B 404	43.442	48.625	136.566	1.00	47.02	C
ATOM	2662	CE1 PHE B 404	43.881	48.078	133.880	1.00	47.18	C
ATOM	2663	CE2 PHE B 404	42.401	48.207	135.759	1.00	47.59	C
ATOM	2664	CZ PHE B 404	42.619	47.926	134.415	1.00	47.23	C
ATOM	2665	N ALA B 405	48.123	51.241	137.700	1.00	51.22	N
ATOM	2666	CA ALA B 405	49.104	51.761	138.632	1.00	53.22	C
ATOM	2667	C ALA B 405	50.194	52.524	137.898	1.00	54.37	C
ATOM	2668	O ALA B 405	50.376	52.443	136.687	1.00	55.44	O
ATOM	2669	CB ALA B 405	49.744	50.597	139.382	1.00	52.66	C
ATOM	2670	N PRO B 406	51.038	53.219	138.656	1.00	55.09	N
ATOM	2671	CA PRO B 406	52.179	53.966	138.148	1.00	54.47	C
ATOM	2672	C PRO B 406	53.075	52.904	137.526	1.00	54.12	C
ATOM	2673	O PRO B 406	53.693	53.198	136.519	1.00	56.78	O
ATOM	2674	CB PRO B 406	52.865	54.697	139.295	1.00	53.61	C
ATOM	2675	CG PRO B 406	51.876	54.542	140.395	1.00	53.88	C
ATOM	2676	CD PRO B 406	50.980	53.359	140.110	1.00	54.88	C
ATOM	2677	N ASN B 407	53.112	51.726	138.094	1.00	52.81	N
ATOM	2678	CA ASN B 407	53.875	50.628	137.605	1.00	53.06	C
ATOM	2679	C ASN B 407	53.019	49.505	137.050	1.00	54.38	C
ATOM	2680	O ASN B 407	53.463	48.349	137.090	1.00	55.05	O
ATOM	2681	CB ASN B 407	54.750	50.056	138.697	1.00	54.10	C
ATOM	2682	CG ASN B 407	53.941	49.244	139.687	1.00	55.16	C
ATOM	2683	OD1 ASN B 407	52.821	49.611	140.031	1.00	56.90	O
ATOM	2684	ND2 ASN B 407	54.492	48.136	140.145	1.00	55.04	N
ATOM	2685	N LEU B 408	51.825	49.796	136.536	1.00	55.00	N
ATOM	2686	CA LEU B 408	51.037	48.720	135.898	1.00	55.25	C
ATOM	2687	C LEU B 408	50.281	49.440	134.782	1.00	55.80	C

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ATOM 2688 O LEU B 408	49.300 50.096 135.101 1.00 56.45	O
ATOM 2689 CB LEU B 408	50.086 47.950 136.763 1.00 54.97	C
ATOM 2690 CG LEU B 408	49.227 46.846 136.146 1.00 54.42	C
ATOM 2691 CD1 LEU B 408	50.000 45.958 135.197 1.00 53.91	C
ATOM 2692 CD2 LEU B 408	48.622 45.981 137.252 1.00 53.90	C
ATOM 2693 N LEU B 409	50.773 49.331 133.557 1.00 56.16	N
ATOM 2694 CA LEU B 409	50.123 50.051 132.449 1.00 55.57	C
ATOM 2695 C LEU B 409	49.671 49.074 131.391 1.00 56.14	C
ATOM 2696 O LEU B 409	50.456 48.791 130.491 1.00 58.54	O
ATOM 2697 CB LEU B 409	51.154 51.029 131.942 1.00 54.18	C
ATOM 2698 CG LEU B 409	50.964 51.930 130.767 1.00 54.11	C
ATOM 2699 CD1 LEU B 409	49.533 52.409 130.593 1.00 55.16	C
ATOM 2700 CD2 LEU B 409	51.811 53.184 130.983 1.00 55.61	C
ATOM 2701 N LEU B 410	48.473 48.520 131.477 1.00 56.37	N
ATOM 2702 CA LEU B 410	48.040 47.576 130.462 1.00 56.51	C
ATOM 2703 C LEU B 410	47.654 48.400 129.236 1.00 58.67	C
ATOM 2704 O LEU B 410	47.424 49.609 129.253 1.00 58.30	O
ATOM 2705 CB LEU B 410	46.927 46.648 130.931 1.00 54.31	C
ATOM 2706 CG LEU B 410	47.304 46.011 132.267 1.00 53.90	C
ATOM 2707 CD1 LEU B 410	46.197 45.127 132.803 1.00 54.71	C
ATOM 2708 CD2 LEU B 410	48.599 45.250 132.068 1.00 53.46	C
ATOM 2709 N ASP B 411	47.623 47.657 128.154 1.00 61.24	N
ATOM 2710 CA ASP B 411	47.285 48.161 126.839 1.00 63.87	C
ATOM 2711 C ASP B 411	46.009 47.463 126.404 1.00 63.71	C
ATOM 2712 O ASP B 411	45.761 46.311 126.804 1.00 63.85	O
ATOM 2713 CB ASP B 411	48.535 47.803 126.035 1.00 68.46	C
ATOM 2714 CG ASP B 411	48.223 47.528 124.579 1.00 72.49	C
ATOM 2715 OD1 ASP B 411	47.638 46.434 124.363 1.00 74.61	O
ATOM 2716 OD2 ASP B 411	48.538 48.418 123.742 1.00 74.14	O
ATOM 2717 N ARG B 412	45.191 48.092 125.568 1.00 63.39	N
ATOM 2718 CA ARG B 412	43.966 47.441 125.156 1.00 64.41	C
ATOM 2719 C ARG B 412	44.074 45.937 124.950 1.00 65.37	C
ATOM 2720 O ARG B 412	43.387 45.129 125.574 1.00 64.97	O
ATOM 2721 CB ARG B 412	43.395 48.061 123.872 1.00 64.50	C
ATOM 2722 CG ARG B 412	42.348 47.114 123.280 1.00 64.68	C
ATOM 2723 CD ARG B 412	41.448 47.797 122.300 1.00 65.82	C
ATOM 2724 NE ARG B 412	40.232 47.031 122.031 1.00 66.28	N
ATOM 2725 CZ ARG B 412	40.212 45.855 121.425 1.00 66.51	C
ATOM 2726 NH1 ARG B 412	41.336 45.265 121.017 1.00 66.41	N
ATOM 2727 NH2 ARG B 412	39.024 45.297 121.244 1.00 66.53	N
ATOM 2728 N ASN B 413	44.934 45.502 124.043 1.00 67.17	N
ATOM 2729 CA ASN B 413	45.090 44.091 123.729 1.00 69.50	C
ATOM 2730 C ASN B 413	45.366 43.206 124.904 1.00 68.94	C
ATOM 2731 O ASN B 413	44.960 42.029 124.885 1.00 69.91	O
ATOM 2732 CB ASN B 413	46.169 43.941 122.641 1.00 73.00	C

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ATOM	2733	CG	ASN B 413	45.728	44.888	121.523	1.00	76.84	C
ATOM	2734	OD1	ASN B 413	44.756	44.574	120.819	1.00	78.31	O
ATOM	2735	ND2	ASN B 413	46.428	46.026	121.436	1.00	78.44	N
ATOM	2736	N	GLN B 414	45.962	43.703	125.979	1.00	67.43	N
ATOM	2737	CA	GLN B 414	46.233	42.878	127.144	1.00	67.38	C
ATOM	2738	C	GLN B 414	44.942	42.478	127.831	1.00	67.45	C
ATOM	2739	O	GLN B 414	44.895	41.539	128.624	1.00	67.65	O
ATOM	2740	CB	GLN B 414	47.181	43.579	128.085	1.00	68.03	C
ATOM	2741	CG	GLN B 414	48.326	44.267	127.347	1.00	69.16	C
ATOM	2742	CD	GLN B 414	49.504	44.423	128.286	1.00	70.04	C
ATOM	2743	OE1	GLN B 414	49.977	45.533	128.543	1.00	70.85	O
ATOM	2744	NE2	GLN B 414	49.937	43.270	128.785	1.00	70.63	N
ATOM	2745	N	GLY B 415	43.874	43.186	127.493	1.00	67.22	N
ATOM	2746	CA	GLY B 415	42.547	42.888	127.973	1.00	67.05	C
ATOM	2747	C	GLY B 415	42.208	41.503	127.458	1.00	67.28	C
ATOM	2748	O	GLY B 415	41.729	40.683	128.237	1.00	67.57	O
ATOM	2749	N	LYS B 416	42.491	41.124	126.222	1.00	68.92	N
ATOM	2750	CA	LYS B 416	42.183	39.795	125.696	1.00	70.33	C
ATOM	2751	C	LYS B 416	42.626	38.637	126.573	1.00	69.51	C
ATOM	2752	O	LYS B 416	42.065	37.535	126.471	1.00	69.07	O
ATOM	2753	CB	LYS B 416	42.727	39.598	124.282	1.00	72.33	C
ATOM	2754	CG	LYS B 416	42.540	40.838	123.420	1.00	75.97	C
ATOM	2755	CD	LYS B 416	41.847	40.504	122.106	1.00	79.42	C
ATOM	2756	CE	LYS B 416	42.789	40.734	120.913	1.00	81.98	C
ATOM	2757	NZ	LYS B 416	42.816	42.169	120.473	1.00	83.37	N
ATOM	2758	N	CYS B 417	43.587	38.831	127.457	1.00	68.76	N
ATOM	2759	CA	CYS B 417	44.050	37.803	128.365	1.00	68.69	C
ATOM	2760	C	CYS B 417	42.879	37.256	129.158	1.00	66.93	C
ATOM	2761	O	CYS B 417	42.751	36.027	129.277	1.00	67.61	O
ATOM	2762	CB	CYS B 417	45.175	38.358	129.255	1.00	70.87	C
ATOM	2763	SG	CYS B 417	46.648	38.798	128.260	1.00	77.46	S
ATOM	2764	N	VAL B 418	42.003	38.097	129.705	1.00	64.44	N
ATOM	2765	CA	VAL B 418	40.879	37.597	130.488	1.00	62.04	C
ATOM	2766	C	VAL B 418	39.613	37.593	129.650	1.00	62.04	C
ATOM	2767	O	VAL B 418	39.380	38.538	128.912	1.00	61.27	O
ATOM	2768	CB	VAL B 418	40.681	38.431	131.763	1.00	61.10	C
ATOM	2769	CG1	VAL B 418	39.454	37.994	132.562	1.00	60.46	C
ATOM	2770	CG2	VAL B 418	41.921	38.354	132.627	1.00	60.19	C
ATOM	2771	N	GLU B 419	38.819	36.553	129.788	1.00	63.39	N
ATOM	2772	CA	GLU B 419	37.562	36.387	129.090	1.00	66.36	C
ATOM	2773	C	GLU B 419	36.616	37.548	129.284	1.00	65.86	C
ATOM	2774	O	GLU B 419	36.415	38.072	130.382	1.00	67.32	O
ATOM	2775	CB	GLU B 419	36.921	35.134	129.688	1.00	71.15	C
ATOM	2776	CG	GLU B 419	36.233	34.240	128.669	1.00	78.37	C
ATOM	2777	CD	GLU B 419	35.261	33.255	129.327	1.00	82.74	C

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ATOM 2778	OE1 GLU B 419	35.537 32.827 130.489 1.00 84.50	O
ATOM 2779	OE2 GLU B 419	34.216 32.915 128.685 1.00 84.77	O
ATOM 2780	N GLY B 420	35.999 38.080 128.255 1.00 65.05	N
ATOM 2781	CA GLY B 420	35.087 39.196 128.340 1.00 64.19	C
ATOM 2782	C GLY B 420	35.630 40.505 128.842 1.00 63.81	C
ATOM 2783	O GLY B 420	34.824 41.432 129.016 1.00 65.36	O
ATOM 2784	N MET B 421	36.911 40.707 129.064 1.00 63.15	N
ATOM 2785	CA MET B 421	37.482 41.947 129.543 1.00 62.44	C
ATOM 2786	C MET B 421	37.725 43.060 128.548 1.00 61.53	C
ATOM 2787	O MET B 421	37.765 44.230 128.906 1.00 61.90	O
ATOM 2788	CB MET B 421	38.895 41.622 130.066 1.00 62.70	C
ATOM 2789	CG MET B 421	38.807 41.413 131.570 1.00 64.57	C
ATOM 2790	SD MET B 421	39.368 42.952 132.341 1.00 66.14	S
ATOM 2791	CE MET B 421	41.116 42.587 132.392 1.00 65.19	C
ATOM 2792	N VAL B 422	37.936 42.711 127.294 1.00 60.88	N
ATOM 2793	CA VAL B 422	38.214 43.700 126.271 1.00 60.19	C
ATOM 2794	C VAL B 422	37.097 44.720 126.122 1.00 59.05	C
ATOM 2795	O VAL B 422	37.439 45.877 125.905 1.00 58.41	O
ATOM 2796	CB VAL B 422	38.396 43.070 124.869 1.00 61.03	C
ATOM 2797	CG1 VAL B 422	39.613 43.651 124.184 1.00 61.10	C
ATOM 2798	CG2 VAL B 422	38.477 41.555 124.995 1.00 62.18	C
ATOM 2799	N GLU B 423	35.837 44.307 126.212 1.00 58.20	N
ATOM 2800	CA GLU B 423	34.758 45.262 126.004 1.00 58.78	C
ATOM 2801	C GLU B 423	34.749 46.282 127.128 1.00 56.18	C
ATOM 2802	O GLU B 423	34.433 47.446 126.902 1.00 55.93	O
ATOM 2803	CB GLU B 423	33.382 44.638 125.929 1.00 63.76	C
ATOM 2804	CG GLU B 423	33.238 43.541 124.887 1.00 70.33	C
ATOM 2805	CD GLU B 423	33.699 42.214 125.504 1.00 75.26	C
ATOM 2806	OE1 GLU B 423	34.934 41.955 125.637 1.00 76.03	O
ATOM 2807	OE2 GLU B 423	32.760 41.431 125.868 1.00 78.52	O
ATOM 2808	N ILE B 424	35.074 45.774 128.314 1.00 52.78	N
ATOM 2809	CA ILE B 424	35.137 46.668 129.476 1.00 49.44	C
ATOM 2810	C ILE B 424	36.299 47.613 129.222 1.00 48.83	C
ATOM 2811	O ILE B 424	36.143 48.850 129.287 1.00 49.54	O
ATOM 2812	CB ILE B 424	35.203 45.825 130.743 1.00 47.99	C
ATOM 2813	CG1 ILE B 424	33.835 45.131 130.862 1.00 46.87	C
ATOM 2814	CG2 ILE B 424	35.469 46.652 131.986 1.00 47.76	C
ATOM 2815	CD1 ILE B 424	33.851 44.133 131.996 1.00 47.74	C
ATOM 2816	N PHE B 425	37.455 47.080 128.832 1.00 47.16	N
ATOM 2817	CA PHE B 425	38.595 47.930 128.544 1.00 47.69	C
ATOM 2818	C PHE B 425	38.220 48.958 127.490 1.00 48.83	C
ATOM 2819	O PHE B 425	38.609 50.123 127.546 1.00 49.72	O
ATOM 2820	CB PHE B 425	39.769 47.100 128.060 1.00 47.94	C
ATOM 2821	CG PHE B 425	40.677 46.581 129.140 1.00 48.23	C
ATOM 2822	CD1 PHE B 425	40.172 46.285 130.394 1.00 48.34	C

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ATOM	2823	CD2 PHE B 425	42.031	46.381	128.907	1.00	47.63	C
ATOM	2824	CE1 PHE B 425	40.983	45.815	131.396	1.00	47.70	C
ATOM	2825	CE2 PHE B 425	42.833	45.916	129.923	1.00	48.04	C
ATOM	2826	CZ PHE B 425	42.321	45.625	131.176	1.00	47.39	C
ATOM	2827	N ASP B 426	37.448	48.532	126.499	1.00	49.87	N
ATOM	2828	CA ASP B 426	37.056	49.426	125.412	1.00	50.42	C
ATOM	2829	C ASP B 426	36.260	50.583	125.947	1.00	50.41	C
ATOM	2830	O ASP B 426	36.621	51.751	125.704	1.00	50.89	O
ATOM	2831	CB ASP B 426	36.416	48.590	124.331	1.00	53.00	C
ATOM	2832	CG ASP B 426	37.493	48.057	123.392	1.00	55.59	C
ATOM	2833	OD1 ASP B 426	38.621	48.596	123.480	1.00	56.98	O
ATOM	2834	OD2 ASP B 426	37.224	47.143	122.584	1.00	57.24	O
ATOM	2835	N MET B 427	35.223	50.294	126.740	1.00	49.36	N
ATOM	2836	CA MET B 427	34.406	51.361	127.343	1.00	47.10	C
ATOM	2837	C MET B 427	35.274	52.289	128.191	1.00	45.73	C
ATOM	2838	O MET B 427	35.167	53.530	128.150	1.00	43.48	O
ATOM	2839	CB MET B 427	33.310	50.689	128.159	1.00	47.07	C
ATOM	2840	CG MET B 427	32.326	49.996	127.228	1.00	48.35	C
ATOM	2841	SD MET B 427	30.954	49.295	128.150	1.00	51.41	S
ATOM	2842	CE MET B 427	31.695	47.858	128.915	1.00	50.08	C
ATOM	2843	N LEU B 428	36.196	51.637	128.952	1.00	43.54	N
ATOM	2844	CA LEU B 428	37.108	52.444	129.758	1.00	41.57	C
ATOM	2845	C LEU B 428	37.918	53.393	128.895	1.00	42.27	C
ATOM	2846	O LEU B 428	37.993	54.612	129.123	1.00	41.21	O
ATOM	2847	CB LEU B 428	37.967	51.529	130.595	1.00	39.86	C
ATOM	2848	CG LEU B 428	37.222	50.863	131.757	1.00	39.33	C
ATOM	2849	CD1 LEU B 428	38.136	49.799	132.341	1.00	39.15	C
ATOM	2850	CD2 LEU B 428	36.829	51.864	132.828	1.00	38.57	C
ATOM	2851	N LEU B 429	38.515	52.861	127.811	1.00	43.16	N
ATOM	2852	CA LEU B 429	39.324	53.737	126.937	1.00	42.07	C
ATOM	2853	C LEU B 429	38.533	54.891	126.369	1.00	41.89	C
ATOM	2854	O LEU B 429	38.920	56.061	126.439	1.00	40.64	O
ATOM	2855	CB LEU B 429	40.032	52.867	125.927	1.00	41.42	C
ATOM	2856	CG LEU B 429	41.087	51.945	126.563	1.00	41.63	C
ATOM	2857	CD1 LEU B 429	41.449	50.835	125.579	1.00	43.40	C
ATOM	2858	CD2 LEU B 429	42.326	52.705	126.967	1.00	41.22	C
ATOM	2859	N ALA B 430	37.351	54.571	125.841	1.00	42.23	N
ATOM	2860	CA ALA B 430	36.449	55.586	125.310	1.00	42.34	C
ATOM	2861	C ALA B 430	36.171	56.692	126.310	1.00	43.49	C
ATOM	2862	O ALA B 430	36.128	57.878	125.983	1.00	44.91	O
ATOM	2863	CB ALA B 430	35.110	54.930	125.035	1.00	42.24	C
ATOM	2864	N THR B 431	35.931	56.335	127.580	1.00	44.17	N
ATOM	2865	CA THR B 431	35.678	57.383	128.568	1.00	43.93	C
ATOM	2866	C THR B 431	36.941	58.214	128.760	1.00	44.46	C
ATOM	2867	O THR B 431	36.949	59.439	128.787	1.00	43.85	O

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ATOM	2868	CB	THR B 431	35.365	56.767	129.941	1.00	43.22	C
ATOM	2869	OG1	THR B 431	34.490	55.700	129.613	1.00	44.07	O
ATOM	2870	CG2	THR B 431	34.770	57.811	130.856	1.00	42.46	C
ATOM	2871	N	SER B 432	38.036	57.451	128.885	1.00	45.42	N
ATOM	2872	CA	SER B 432	39.336	58.071	129.093	1.00	46.40	C
ATOM	2873	C	SER B 432	39.624	59.090	128.007	1.00	47.18	C
ATOM	2874	O	SER B 432	40.081	60.200	128.226	1.00	46.93	O
ATOM	2875	CB	SER B 432	40.426	57.005	129.165	1.00	46.68	C
ATOM	2876	OG	SER B 432	41.615	57.762	129.362	1.00	47.93	O
ATOM	2877	N	SER B 433	39.322	58.696	126.779	1.00	49.00	N
ATOM	2878	CA	SER B 433	39.439	59.529	125.597	1.00	50.60	C
ATOM	2879	C	SER B 433	38.550	60.765	125.663	1.00	51.04	C
ATOM	2880	O	SER B 433	38.936	61.913	125.493	1.00	49.73	O
ATOM	2881	CB	SER B 433	38.933	58.601	124.478	1.00	51.44	C
ATOM	2882	OG	SER B 433	39.347	59.183	123.261	1.00	54.59	O
ATOM	2883	N	ARG B 434	37.257	60.564	125.992	1.00	52.57	N
ATOM	2884	CA	ARG B 434	36.343	61.687	126.091	1.00	53.56	C
ATOM	2885	C	ARG B 434	36.889	62.658	127.134	1.00	54.08	C
ATOM	2886	O	ARG B 434	36.787	63.875	126.933	1.00	53.90	O
ATOM	2887	CB	ARG B 434	34.897	61.260	126.323	1.00	54.32	C
ATOM	2888	CG	ARG B 434	34.002	62.475	126.553	1.00	57.09	C
ATOM	2889	CD	ARG B 434	32.656	62.443	125.853	1.00	59.84	C
ATOM	2890	NE	ARG B 434	31.929	63.746	125.929	1.00	62.03	N
ATOM	2891	CZ	ARG B 434	32.361	64.759	125.146	1.00	62.85	C
ATOM	2892	NH1	ARG B 434	33.422	64.480	124.363	1.00	64.15	N
ATOM	2893	NH2	ARG B 434	31.824	65.968	125.103	1.00	61.67	N
ATOM	2894	N	PHE B 435	37.462	62.164	128.238	1.00	54.74	N
ATOM	2895	CA	PHE B 435	37.988	63.060	129.258	1.00	56.24	C
ATOM	2896	C	PHE B 435	39.122	63.878	128.661	1.00	57.90	C
ATOM	2897	O	PHE B 435	39.213	65.071	128.914	1.00	57.34	O
ATOM	2898	CB	PHE B 435	38.418	62.337	130.527	1.00	56.05	C
ATOM	2899	CG	PHE B 435	37.308	62.036	131.502	1.00	56.15	C
ATOM	2900	CD1	PHE B 435	36.024	62.524	131.369	1.00	55.57	C
ATOM	2901	CD2	PHE B 435	37.568	61.227	132.593	1.00	56.19	C
ATOM	2902	CE1	PHE B 435	35.037	62.232	132.264	1.00	55.28	C
ATOM	2903	CE2	PHE B 435	36.594	60.905	133.516	1.00	56.05	C
ATOM	2904	CZ	PHE B 435	35.316	61.417	133.338	1.00	56.32	C
ATOM	2905	N	ARG B 436	39.955	63.231	127.854	1.00	60.28	N
ATOM	2906	CA	ARG B 436	41.058	63.905	127.192	1.00	62.39	C
ATOM	2907	C	ARG B 436	40.479	65.002	126.321	1.00	63.40	C
ATOM	2908	O	ARG B 436	40.774	66.177	126.463	1.00	64.03	O
ATOM	2909	CB	ARG B 436	41.829	62.929	126.314	1.00	63.83	C
ATOM	2910	CG	ARG B 436	43.304	63.231	126.193	1.00	66.34	C
ATOM	2911	CD	ARG B 436	44.026	62.204	125.336	1.00	69.23	C
ATOM	2912	NE	ARG B 436	43.917	60.836	125.853	1.00	71.66	N

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ATOM	2913	CZ	ARG B 436	43.324	59.840	125.180	1.00	72.86	C
ATOM	2914	NH1	ARG B 436	42.810	60.095	123.976	1.00	73.40	N
ATOM	2915	NH2	ARG B 436	43.232	58.604	125.672	1.00	72.90	N
ATOM	2916	N	MET B 437	39.570	64.663	125.428	1.00	65.72	N
ATOM	2917	CA	MET B 437	38.970	65.636	124.544	1.00	68.81	C
ATOM	2918	C	MET B 437	38.387	66.844	125.243	1.00	67.69	C
ATOM	2919	O	MET B 437	38.544	67.947	124.720	1.00	68.52	O
ATOM	2920	CB	MET B 437	37.833	65.015	123.754	1.00	74.54	C
ATOM	2921	CG	MET B 437	38.274	64.054	122.655	1.00	81.30	C
ATOM	2922	SD	MET B 437	36.917	63.928	121.465	1.00	89.15	S
ATOM	2923	CE	MET B 437	35.559	63.149	122.345	1.00	86.63	C
ATOM	2924	N	MET B 438	37.713	66.710	126.374	1.00	65.72	N
ATOM	2925	CA	MET B 438	37.118	67.842	127.067	1.00	63.42	C
ATOM	2926	C	MET B 438	38.109	68.555	127.968	1.00	62.14	C
ATOM	2927	O	MET B 438	37.750	69.507	128.645	1.00	60.02	O
ATOM	2928	CB	MET B 438	36.061	67.324	128.031	1.00	63.77	C
ATOM	2929	CG	MET B 438	35.041	66.439	127.344	1.00	64.35	C
ATOM	2930	SD	MET B 438	33.536	66.392	128.288	1.00	66.02	S
ATOM	2931	CE	MET B 438	33.500	67.885	129.259	1.00	65.51	C
ATOM	2932	N	ASN B 439	39.296	67.968	127.996	1.00	62.48	N
ATOM	2933	CA	ASN B 439	40.356	68.505	128.828	1.00	64.27	C
ATOM	2934	C	ASN B 439	39.836	68.750	130.233	1.00	62.27	C
ATOM	2935	O	ASN B 439	39.681	69.840	130.774	1.00	61.92	O
ATOM	2936	CB	ASN B 439	40.861	69.770	128.130	1.00	69.43	C
ATOM	2937	CG	ASN B 439	42.025	70.334	128.934	1.00	73.73	C
ATOM	2938	OD1	ASN B 439	42.217	71.552	128.935	1.00	75.63	O
ATOM	2939	ND2	ASN B 439	42.748	69.436	129.628	1.00	75.89	N
ATOM	2940	N	LEU B 440	39.508	67.623	130.851	1.00	60.78	N
ATOM	2941	CA	LEU B 440	38.935	67.583	132.177	1.00	59.93	C
ATOM	2942	C	LEU B 440	39.990	67.981	133.202	1.00	60.33	C
ATOM	2943	O	LEU B 440	41.062	67.384	133.217	1.00	59.59	O
ATOM	2944	CB	LEU B 440	38.361	66.193	132.458	1.00	58.98	C
ATOM	2945	CG	LEU B 440	37.877	65.896	133.894	1.00	58.26	C
ATOM	2946	CD1	LEU B 440	36.600	66.673	134.202	1.00	56.71	C
ATOM	2947	CD2	LEU B 440	37.742	64.384	134.078	1.00	56.85	C
ATOM	2948	N	GLN B 441	39.618	68.963	134.014	1.00	60.51	N
ATOM	2949	CA	GLN B 441	40.492	69.435	135.061	1.00	61.71	C
ATOM	2950	C	GLN B 441	40.416	68.581	136.308	1.00	61.39	C
ATOM	2951	O	GLN B 441	39.381	67.976	136.584	1.00	62.81	O
ATOM	2952	CB	GLN B 441	39.988	70.818	135.515	1.00	64.63	C
ATOM	2953	CG	GLN B 441	40.136	71.914	134.473	1.00	68.23	C
ATOM	2954	CD	GLN B 441	41.466	71.841	133.743	1.00	69.81	C
ATOM	2955	OE1	GLN B 441	42.458	72.259	134.344	1.00	71.06	O
ATOM	2956	NE2	GLN B 441	41.446	71.313	132.517	1.00	70.88	N
ATOM	2957	N	GLY B 442	41.453	68.601	137.127	1.00	60.83	N

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ATOM	2958	CA	GLY B 442	41.451	67.852	138.380	1.00	58.59	C
ATOM	2959	C	GLY B 442	40.381	68.371	139.311	1.00	57.45	C
ATOM	2960	O	GLY B 442	39.750	67.550	139.971	1.00	57.67	O
ATOM	2961	N	GLU B 443	40.110	69.665	139.394	1.00	57.46	N
ATOM	2962	CA	GLU B 443	39.071	70.172	140.290	1.00	58.76	C
ATOM	2963	C	GLU B 443	37.701	69.598	139.853	1.00	56.56	C
ATOM	2964	O	GLU B 443	36.801	69.336	140.659	1.00	55.98	O
ATOM	2965	CB	GLU B 443	38.915	71.685	140.392	1.00	61.69	C
ATOM	2966	CG	GLU B 443	40.077	72.578	140.705	1.00	65.54	C
ATOM	2967	CD	GLU B 443	41.234	72.324	139.750	1.00	69.36	C
ATOM	2968	OE1	GLU B 443	41.018	72.218	138.513	1.00	70.43	O
ATOM	2969	OE2	GLU B 443	42.375	72.210	140.277	1.00	71.96	O
ATOM	2970	N	GLU B 444	37.557	69.444	138.539	1.00	53.20	N
ATOM	2971	CA	GLU B 444	36.342	68.887	137.981	1.00	50.57	C
ATOM	2972	C	GLU B 444	36.286	67.415	138.361	1.00	49.12	C
ATOM	2973	O	GLU B 444	35.270	66.955	138.881	1.00	49.11	O
ATOM	2974	CB	GLU B 444	36.350	69.031	136.465	1.00	50.33	C
ATOM	2975	CG	GLU B 444	35.989	70.466	136.085	1.00	49.89	C
ATOM	2976	CD	GLU B 444	36.187	70.701	134.602	1.00	50.08	C
ATOM	2977	OE1	GLU B 444	37.163	70.127	134.046	1.00	49.93	O
ATOM	2978	OE2	GLU B 444	35.324	71.458	134.107	1.00	50.00	O
ATOM	2979	N	PHE B 445	37.398	66.720	138.123	1.00	47.04	N
ATOM	2980	CA	PHE B 445	37.485	65.299	138.458	1.00	45.59	C
ATOM	2981	C	PHE B 445	36.995	64.993	139.867	1.00	46.10	C
ATOM	2982	O	PHE B 445	36.101	64.205	140.163	1.00	46.63	O
ATOM	2983	CB	PHE B 445	38.919	64.814	138.315	1.00	43.27	C
ATOM	2984	CG	PHE B 445	39.145	63.452	138.876	1.00	42.65	C
ATOM	2985	CD1	PHE B 445	38.452	62.370	138.401	1.00	43.72	C
ATOM	2986	CD2	PHE B 445	40.046	63.227	139.881	1.00	43.37	C
ATOM	2987	CE1	PHE B 445	38.644	61.098	138.909	1.00	44.67	C
ATOM	2988	CE2	PHE B 445	40.284	61.979	140.419	1.00	43.66	C
ATOM	2989	CZ	PHE B 445	39.574	60.907	139.917	1.00	44.59	C
ATOM	2990	N	VAL B 446	37.590	65.656	140.833	1.00	46.31	N
ATOM	2991	CA	VAL B 446	37.277	65.532	142.254	1.00	46.33	C
ATOM	2992	C	VAL B 446	35.810	65.787	142.543	1.00	47.52	C
ATOM	2993	O	VAL B 446	35.184	65.166	143.431	1.00	48.08	O
ATOM	2994	CB	VAL B 446	38.311	66.442	142.934	1.00	45.14	C
ATOM	2995	CG1	VAL B 446	37.743	67.475	143.832	1.00	45.02	C
ATOM	2996	CG2	VAL B 446	39.302	65.572	143.699	1.00	45.97	C
ATOM	2997	N	CYS B 447	35.158	66.685	141.809	1.00	47.38	N
ATOM	2998	CA	CYS B 447	33.755	66.952	142.040	1.00	48.88	C
ATOM	2999	C	CYS B 447	32.865	65.818	141.558	1.00	49.14	C
ATOM	3000	O	CYS B 447	31.941	65.374	142.235	1.00	49.68	O
ATOM	3001	CB	CYS B 447	33.375	68.225	141.275	1.00	50.13	C
ATOM	3002	SG	CYS B 447	33.720	69.719	142.194	1.00	53.53	S

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ATOM 3003	N LEU B 448	33.122 65.336 140.341 1.00 48.95	N
ATOM 3004	CA LEU B 448	32.344 64.260 139.734 1.00 47.16	C
ATOM 3005	C LEU B 448	32.437 63.023 140.618 1.00 46.56	C
ATOM 3006	O LEU B 448	31.432 62.376 140.924 1.00 47.61	O
ATOM 3007	CB LEU B 448	32.865 63.902 138.361 1.00 47.65	C
ATOM 3008	CG LEU B 448	32.616 64.881 137.213 1.00 48.16	C
ATOM 3009	CD1 LEU B 448	33.430 64.435 135.992 1.00 48.65	C
ATOM 3010	CD2 LEU B 448	31.135 64.937 136.890 1.00 47.17	C
ATOM 3011	N LYS B 449	33.650 62.740 141.087 1.00 44.57	N
ATOM 3012	CA LYS B 449	33.830 61.590 141.963 1.00 43.44	C
ATOM 3013	C LYS B 449	32.912 61.728 143.151 1.00 43.26	C
ATOM 3014	O LYS B 449	32.262 60.740 143.539 1.00 44.55	O
ATOM 3015	CB LYS B 449	35.304 61.464 142.272 1.00 44.12	C
ATOM 3016	CG LYS B 449	35.798 60.032 142.426 1.00 44.36	C
ATOM 3017	CD LYS B 449	36.782 60.041 143.569 1.00 45.90	C
ATOM 3018	CE LYS B 449	38.197 60.360 143.103 1.00 46.74	C
ATOM 3019	NZ LYS B 449	39.081 60.103 144.303 1.00 48.51	N
ATOM 3020	N SER B 450	32.765 62.899 143.767 1.00 42.43	N
ATOM 3021	CA SER B 450	31.846 62.976 144.909 1.00 42.81	C
ATOM 3022	C SER B 450	30.399 62.836 144.484 1.00 41.70	C
ATOM 3023	O SER B 450	29.594 62.261 145.208 1.00 42.04	O
ATOM 3024	CB SER B 450	31.905 64.329 145.633 1.00 44.22	C
ATOM 3025	OG SER B 450	33.285 64.483 145.953 1.00 48.34	O
ATOM 3026	N ILE B 451	30.067 63.392 143.318 1.00 40.21	N
ATOM 3027	CA ILE B 451	28.689 63.295 142.852 1.00 38.74	C
ATOM 3028	C ILE B 451	28.361 61.816 142.756 1.00 38.58	C
ATOM 3029	O ILE B 451	27.305 61.378 143.211 1.00 37.33	O
ATOM 3030	CB ILE B 451	28.571 64.007 141.514 1.00 39.81	C
ATOM 3031	CG1 ILE B 451	28.772 65.508 141.765 1.00 40.80	C
ATOM 3032	CG2 ILE B 451	27.239 63.690 140.853 1.00 39.99	C
ATOM 3033	CD1 ILE B 451	28.421 66.370 140.544 1.00 42.17	C
ATOM 3034	N ILE B 452	29.284 61.035 142.170 1.00 38.63	N
ATOM 3035	CA ILE B 452	29.082 59.592 142.020 1.00 37.62	C
ATOM 3036	C ILE B 452	28.825 58.938 143.373 1.00 38.09	C
ATOM 3037	O ILE B 452	27.889 58.162 143.541 1.00 37.47	O
ATOM 3038	CB ILE B 452	30.270 58.895 141.326 1.00 36.64	C
ATOM 3039	CG1 ILE B 452	30.469 59.451 139.926 1.00 36.43	C
ATOM 3040	CG2 ILE B 452	30.041 57.381 141.292 1.00 36.66	C
ATOM 3041	CD1 ILE B 452	31.347 58.695 138.958 1.00 35.50	C
ATOM 3042	N LEU B 453	29.658 59.254 144.362 1.00 38.77	N
ATOM 3043	CA LEU B 453	29.499 58.683 145.683 1.00 39.54	C
ATOM 3044	C LEU B 453	28.130 59.031 146.243 1.00 40.27	C
ATOM 3045	O LEU B 453	27.508 58.168 146.829 1.00 41.50	O
ATOM 3046	CB LEU B 453	30.559 59.195 146.693 1.00 38.52	C
ATOM 3047	CG LEU B 453	30.293 58.818 148.163 1.00 36.48	C

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ATOM	3048	CD1 LEU B 453	30.346	57.290	148.303	1.00	35.34	C
ATOM	3049	CD2 LEU B 453	31.261	59.494	149.101	1.00	34.62	C
ATOM	3050	N LEU B 454	27.674	60.256	146.120	1.00	41.82	N
ATOM	3051	CA LEU B 454	26.396	60.637	146.674	1.00	44.05	C
ATOM	3052	C LEU B 454	25.162	60.327	145.862	1.00	45.24	C
ATOM	3053	O LEU B 454	24.128	60.086	146.495	1.00	46.85	O
ATOM	3054	CB LEU B 454	26.378	62.178	146.885	1.00	44.74	C
ATOM	3055	CG LEU B 454	27.236	62.576	148.097	1.00	45.66	C
ATOM	3056	CD1 LEU B 454	27.607	64.044	148.009	1.00	45.79	C
ATOM	3057	CD2 LEU B 454	26.473	62.232	149.371	1.00	45.00	C
ATOM	3058	N ASN B 455	25.209	60.363	144.537	1.00	45.90	N
ATOM	3059	CA ASN B 455	23.982	60.132	143.788	1.00	46.42	C
ATOM	3060	C ASN B 455	23.684	58.702	143.447	1.00	48.26	C
ATOM	3061	O ASN B 455	22.534	58.392	143.174	1.00	49.21	O
ATOM	3062	CB ASN B 455	24.057	60.975	142.520	1.00	45.68	C
ATOM	3063	CG ASN B 455	23.064	60.682	141.425	1.00	45.90	C
ATOM	3064	OD1 ASN B 455	23.494	60.090	140.421	1.00	46.29	O
ATOM	3065	ND2 ASN B 455	21.792	61.049	141.557	1.00	45.25	N
ATOM	3066	N SER B 456	24.653	57.825	143.413	1.00	51.81	N
ATOM	3067	CA SER B 456	24.372	56.470	142.958	1.00	55.59	C
ATOM	3068	C SER B 456	23.398	55.709	143.819	1.00	58.38	C
ATOM	3069	O SER B 456	22.415	55.102	143.341	1.00	60.04	O
ATOM	3070	CB SER B 456	25.695	55.731	142.691	1.00	55.54	C
ATOM	3071	OG SER B 456	26.221	56.035	141.409	1.00	54.08	O
ATOM	3072	N GLY B 457	23.583	55.672	145.120	1.00	60.95	N
ATOM	3073	CA GLY B 457	22.682	54.879	145.959	1.00	64.29	C
ATOM	3074	C GLY B 457	21.553	55.683	146.563	1.00	66.39	C
ATOM	3075	O GLY B 457	20.913	55.152	147.471	1.00	66.86	O
ATOM	3076	N VAL B 458	21.330	56.900	146.093	1.00	68.78	N
ATOM	3077	CA VAL B 458	20.273	57.720	146.657	1.00	71.73	C
ATOM	3078	C VAL B 458	18.876	57.197	146.474	1.00	75.24	C
ATOM	3079	O VAL B 458	18.109	57.310	147.445	1.00	76.47	O
ATOM	3080	CB VAL B 458	20.424	59.192	146.236	1.00	70.64	C
ATOM	3081	CG1 VAL B 458	20.050	59.486	144.824	1.00	69.26	C
ATOM	3082	CG2 VAL B 458	19.568	60.013	147.199	1.00	71.48	C
ATOM	3083	N TYR B 459	18.463	56.574	145.390	1.00	79.87	N
ATOM	3084	CA TYR B 459	17.134	56.038	145.167	1.00	84.11	C
ATOM	3085	C TYR B 459	16.946	54.676	145.792	1.00	86.55	C
ATOM	3086	O TYR B 459	16.030	53.954	145.393	1.00	88.11	O
ATOM	3087	CB TYR B 459	16.803	55.878	143.650	1.00	85.70	C
ATOM	3088	CG TYR B 459	17.118	57.209	142.998	1.00	87.73	C
ATOM	3089	CD1 TYR B 459	18.413	57.461	142.558	1.00	88.64	C
ATOM	3090	CD2 TYR B 459	16.167	58.203	142.864	1.00	88.88	C
ATOM	3091	CE1 TYR B 459	18.719	58.680	141.989	1.00	90.47	C
ATOM	3092	CE2 TYR B 459	16.465	59.434	142.302	1.00	90.05	C

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ATOM	3093	CZ	TYR B 459	17.751	59.671	141.859	1.00	91.06	C
ATOM	3094	OH	TYR B 459	18.104	60.879	141.284	1.00	91.37	O
ATOM	3095	N	THR B 460	17.791	54.275	146.723	1.00	89.27	N
ATOM	3096	CA	THR B 460	17.696	52.963	147.349	1.00	91.88	C
ATOM	3097	C	THR B 460	18.046	53.054	148.823	1.00	93.36	C
ATOM	3098	O	THR B 460	18.785	52.210	149.337	1.00	94.79	O
ATOM	3099	CB	THR B 460	18.632	51.960	146.646	1.00	92.06	C
ATOM	3100	OG1	THR B 460	19.410	52.576	145.619	1.00	92.11	O
ATOM	3101	CG2	THR B 460	17.792	50.858	146.004	1.00	92.70	C
ATOM	3102	N	PHE B 461	17.515	54.069	149.500	1.00	94.73	N
ATOM	3103	CA	PHE B 461	17.859	54.213	150.908	1.00	96.05	C
ATOM	3104	C	PHE B 461	17.326	53.194	151.901	1.00	97.26	C
ATOM	3105	O	PHE B 461	18.130	52.818	152.792	1.00	98.80	O
ATOM	3106	CB	PHE B 461	17.606	55.676	151.347	1.00	95.27	C
ATOM	3107	CG	PHE B 461	18.949	56.371	151.346	1.00	93.93	C
ATOM	3108	CD1	PHE B 461	20.094	55.640	151.595	1.00	93.61	C
ATOM	3109	CD2	PHE B 461	19.057	57.711	151.094	1.00	93.78	C
ATOM	3110	CE1	PHE B 461	21.335	56.213	151.596	1.00	93.77	C
ATOM	3111	CE2	PHE B 461	20.299	58.302	151.102	1.00	94.08	C
ATOM	3112	CZ	PHE B 461	21.440	57.561	151.352	1.00	94.15	C
ATOM	3113	N	THR B 465	12.062	55.598	156.856	1.00	127.89	N
ATOM	3114	CA	THR B 465	11.376	56.339	155.799	1.00	127.95	C
ATOM	3115	C	THR B 465	11.498	57.840	156.013	1.00	126.96	C
ATOM	3116	O	THR B 465	12.197	58.519	155.248	1.00	127.27	O
ATOM	3117	CB	THR B 465	9.894	55.955	155.656	1.00	128.72	C
ATOM	3118	OG1	THR B 465	9.129	57.038	155.098	1.00	128.98	O
ATOM	3119	CG2	THR B 465	9.287	55.593	157.006	1.00	129.23	C
ATOM	3120	N	LEU B 466	10.869	58.384	157.059	1.00	124.89	N
ATOM	3121	CA	LEU B 466	10.961	59.824	157.332	1.00	122.32	C
ATOM	3122	C	LEU B 466	12.408	60.267	157.527	1.00	120.00	C
ATOM	3123	O	LEU B 466	12.768	61.399	157.181	1.00	119.94	O
ATOM	3124	CB	LEU B 466	10.096	60.195	158.534	1.00	122.85	C
ATOM	3128	N	LYS B 467	13.254	59.379	158.062	1.00	116.82	N
ATOM	3129	CA	LYS B 467	14.682	59.645	158.205	1.00	113.35	C
ATOM	3130	C	LYS B 467	15.280	59.562	156.793	1.00	109.17	C
ATOM	3131	O	LYS B 467	16.185	60.308	156.456	1.00	108.84	O
ATOM	3132	CB	LYS B 467	15.415	58.680	159.128	1.00	114.90	C
ATOM	3133	CG	LYS B 467	16.700	59.217	159.758	1.00	115.96	C
ATOM	3134	CD	LYS B 467	17.490	58.084	160.396	1.00	116.96	C
ATOM	3135	CE	LYS B 467	17.369	57.980	161.908	1.00	117.29	C
ATOM	3136	NZ	LYS B 467	17.979	56.702	162.410	1.00	117.19	N
ATOM	3137	N	SER B 468	14.751	58.678	155.954	1.00	104.27	N
ATOM	3138	CA	SER B 468	15.196	58.536	154.585	1.00	99.91	C
ATOM	3139	C	SER B 468	14.861	59.789	153.786	1.00	96.52	C
ATOM	3140	O	SER B 468	15.661	60.257	152.986	1.00	96.33	O

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ATOM 3141 CB SER B 468	14.518 57.369 153.865 1.00100.33	C
ATOM 3142 OG SER B 468	14.946 56.142 154.419 1.00101.36	O
ATOM 3143 N LEU B 469	13.669 60.334 154.008 1.00 92.58	N
ATOM 3144 CA LEU B 469	13.240 61.536 153.297 1.00 89.00	C
ATOM 3145 C LEU B 469	14.176 62.663 153.687 1.00 86.59	C
ATOM 3146 O LEU B 469	14.526 63.522 152.886 1.00 86.06	O
ATOM 3147 CB LEU B 469	11.775 61.857 153.578 1.00 89.46	C
ATOM 3151 N GLU B 470	14.614 62.658 154.934 1.00 84.75	N
ATOM 3152 CA GLU B 470	15.553 63.680 155.409 1.00 83.83	C
ATOM 3153 C GLU B 470	16.940 63.374 154.870 1.00 79.82	C
ATOM 3154 O GLU B 470	17.699 64.245 154.462 1.00 78.99	O
ATOM 3155 CB GLU B 470	15.408 63.750 156.913 1.00 88.01	C
ATOM 3156 CG GLU B 470	16.703 63.787 157.705 1.00 93.53	C
ATOM 3157 CD GLU B 470	16.434 63.541 159.185 1.00 97.16	C
ATOM 3158 OE1 GLU B 470	15.314 63.053 159.516 1.00 98.71	O
ATOM 3159 OE2 GLU B 470	17.365 63.849 159.982 1.00 99.17	O
ATOM 3160 N GLU B 471	17.323 62.106 154.807 1.00 75.78	N
ATOM 3161 CA GLU B 471	18.593 61.660 154.266 1.00 71.86	C
ATOM 3162 C GLU B 471	18.605 62.021 152.775 1.00 70.49	C
ATOM 3163 O GLU B 471	19.582 62.544 152.244 1.00 71.13	O
ATOM 3164 CB GLU B 471	18.795 60.156 154.404 1.00 70.33	C
ATOM 3165 CG GLU B 471	18.983 59.604 155.781 1.00 69.51	C
ATOM 3166 CD GLU B 471	20.401 59.447 156.253 1.00 69.90	C
ATOM 3167 OE1 GLU B 471	21.123 58.551 155.784 1.00 69.90	O
ATOM 3168 OE2 GLU B 471	20.888 60.204 157.125 1.00 70.61	O
ATOM 3169 N LYS B 472	17.512 61.755 152.064 1.00 68.23	N
ATOM 3170 CA LYS B 472	17.443 62.094 150.661 1.00 66.98	C
ATOM 3171 C LYS B 472	17.599 63.591 150.478 1.00 65.63	C
ATOM 3172 O LYS B 472	18.392 63.964 149.607 1.00 65.62	O
ATOM 3173 CB LYS B 472	16.170 61.590 150.011 1.00 68.62	C
ATOM 3174 CG LYS B 472	16.125 60.081 149.849 1.00 71.13	C
ATOM 3175 CD LYS B 472	15.015 59.682 148.893 1.00 74.04	C
ATOM 3176 CE LYS B 472	14.408 58.333 149.248 1.00 76.38	C
ATOM 3177 NZ LYS B 472	15.152 57.157 148.664 1.00 77.87	N
ATOM 3178 N ASP B 473	16.920 64.440 151.237 1.00 64.78	N
ATOM 3179 CA ASP B 473	17.082 65.877 151.034 1.00 65.36	C
ATOM 3180 C ASP B 473	18.516 66.332 151.232 1.00 62.76	C
ATOM 3181 O ASP B 473	19.109 67.035 150.430 1.00 63.80	O
ATOM 3182 CB ASP B 473	16.291 66.752 152.000 1.00 69.33	C
ATOM 3183 CG ASP B 473	14.816 66.470 151.832 1.00 73.90	C
ATOM 3184 OD1 ASP B 473	14.441 65.701 150.904 1.00 76.03	O
ATOM 3185 OD2 ASP B 473	14.069 67.050 152.657 1.00 76.73	O
ATOM 3186 N HIS B 474	19.072 65.908 152.354 1.00 59.23	N
ATOM 3187 CA HIS B 474	20.449 66.243 152.659 1.00 56.40	C
ATOM 3188 C HIS B 474	21.328 65.998 151.428 1.00 55.19	C

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ATOM 3189	O HIS B 474	22.045 66.881 150.947 1.00 53.51	O
ATOM 3190	CB HIS B 474	20.887 65.360 153.835 1.00 55.62	C
ATOM 3191	CG HIS B 474	22.279 65.818 154.180 1.00 56.07	C
ATOM 3192	ND1 HIS B 474	22.540 67.145 154.498 1.00 55.48	N
ATOM 3193	CD2 HIS B 474	23.435 65.111 154.203 1.00 56.58	C
ATOM 3194	CE1 HIS B 474	23.843 67.220 154.730 1.00 56.88	C
ATOM 3195	NE2 HIS B 474	24.410 66.017 154.559 1.00 57.47	N
ATOM 3196	N ILE B 475	21.250 64.758 150.917 1.00 54.03	N
ATOM 3197	CA ILE B 475	22.003 64.377 149.746 1.00 53.42	C
ATOM 3198	C ILE B 475	21.668 65.281 148.572 1.00 53.75	C
ATOM 3199	O ILE B 475	22.569 65.802 147.901 1.00 52.81	O
ATOM 3200	CB ILE B 475	21.753 62.918 149.374 1.00 53.33	C
ATOM 3201	CG1 ILE B 475	22.378 62.047 150.462 1.00 53.70	C
ATOM 3202	CG2 ILE B 475	22.370 62.593 148.021 1.00 53.57	C
ATOM 3203	CD1 ILE B 475	22.291 60.573 150.105 1.00 54.14	C
ATOM 3204	N HIS B 476	20.391 65.533 148.302 1.00 54.79	N
ATOM 3205	CA HIS B 476	20.092 66.414 147.169 1.00 57.16	C
ATOM 3206	C HIS B 476	20.729 67.776 147.357 1.00 58.28	C
ATOM 3207	O HIS B 476	21.293 68.396 146.440 1.00 58.61	O
ATOM 3208	CB HIS B 476	18.596 66.470 146.957 1.00 59.37	C
ATOM 3209	CG HIS B 476	18.080 65.206 146.317 1.00 61.81	C
ATOM 3210	ND1 HIS B 476	18.745 64.600 145.267 1.00 62.78	N
ATOM 3211	CD2 HIS B 476	16.989 64.450 146.584 1.00 61.95	C
ATOM 3212	CE1 HIS B 476	18.057 63.517 144.922 1.00 63.31	C
ATOM 3213	NE2 HIS B 476	16.995 63.403 145.701 1.00 62.29	N
ATOM 3214	N ARG B 477	20.681 68.281 148.587 1.00 59.16	N
ATOM 3215	CA ARG B 477	21.236 69.547 148.986 1.00 58.98	C
ATOM 3216	C ARG B 477	22.726 69.681 148.710 1.00 57.17	C
ATOM 3217	O ARG B 477	23.164 70.678 148.124 1.00 56.93	O
ATOM 3218	CB ARG B 477	21.033 69.701 150.492 1.00 62.77	C
ATOM 3219	CG ARG B 477	20.678 71.151 150.807 1.00 69.05	C
ATOM 3220	CD ARG B 477	19.157 71.257 150.564 1.00 74.67	C
ATOM 3221	NE ARG B 477	18.517 70.405 151.574 1.00 79.86	N
ATOM 3222	CZ ARG B 477	18.429 70.786 152.859 1.00 82.73	C
ATOM 3223	NH1 ARG B 477	18.913 71.971 153.235 1.00 83.81	N
ATOM 3224	NH2 ARG B 477	17.848 69.972 153.749 1.00 83.97	N
ATOM 3225	N VAL B 478	23.494 68.680 149.141 1.00 54.36	N
ATOM 3226	CA VAL B 478	24.943 68.675 148.939 1.00 52.49	C
ATOM 3227	C VAL B 478	25.235 68.604 147.450 1.00 52.18	C
ATOM 3228	O VAL B 478	26.104 69.239 146.842 1.00 51.94	O
ATOM 3229	CB VAL B 478	25.543 67.480 149.693 1.00 52.54	C
ATOM 3230	CG1 VAL B 478	27.053 67.386 149.590 1.00 52.18	C
ATOM 3231	CG2 VAL B 478	25.113 67.585 151.156 1.00 53.20	C
ATOM 3232	N LEU B 479	24.407 67.803 146.763 1.00 51.49	N
ATOM 3233	CA LEU B 479	24.513 67.646 145.311 1.00 49.86	C

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ATOM 3234 C LEU B 479	24.395 69.020 144.666 1.00 50.12	C
ATOM 3235 O LEU B 479	25.165 69.295 143.740 1.00 50.39	O
ATOM 3236 CB LEU B 479	23.496 66.630 144.787 1.00 46.59	C
ATOM 3237 CG LEU B 479	23.998 65.183 144.867 1.00 44.76	C
ATOM 3238 CD1 LEU B 479	22.873 64.231 144.537 1.00 44.80	C
ATOM 3239 CD2 LEU B 479	25.182 64.961 143.942 1.00 44.34	C
ATOM 3240 N ASP B 480	23.478 69.860 145.159 1.00 50.73	N
ATOM 3241 CA ASP B 480	23.365 71.196 144.568 1.00 52.25	C
ATOM 3242 C ASP B 480	24.633 71.994 144.842 1.00 52.37	C
ATOM 3243 O ASP B 480	25.177 72.652 143.956 1.00 51.99	O
ATOM 3244 CB ASP B 480	22.148 71.963 145.047 1.00 53.28	C
ATOM 3245 CG ASP B 480	20.835 71.318 144.638 1.00 54.67	C
ATOM 3246 OD1 ASP B 480	20.799 70.546 143.657 1.00 55.26	O
ATOM 3247 OD2 ASP B 480	19.791 71.559 145.291 1.00 55.41	O
ATOM 3248 N LYS B 481	25.139 71.893 146.064 1.00 53.75	N
ATOM 3249 CA LYS B 481	26.357 72.608 146.440 1.00 54.79	C
ATOM 3250 C LYS B 481	27.474 72.167 145.520 1.00 54.09	C
ATOM 3251 O LYS B 481	28.165 73.015 144.955 1.00 55.38	O
ATOM 3252 CB LYS B 481	26.743 72.364 147.889 1.00 58.10	C
ATOM 3253 CG LYS B 481	27.789 73.346 148.394 1.00 62.90	C
ATOM 3254 CD LYS B 481	27.145 74.541 149.106 1.00 66.84	C
ATOM 3255 CE LYS B 481	27.999 75.805 149.020 1.00 69.39	C
ATOM 3256 NZ LYS B 481	29.024 75.782 147.919 1.00 71.15	N
ATOM 3257 N ILE B 482	27.646 70.855 145.320 1.00 52.58	N
ATOM 3258 CA ILE B 482	28.705 70.401 144.407 1.00 50.25	C
ATOM 3259 C ILE B 482	28.406 70.935 143.020 1.00 49.16	C
ATOM 3260 O ILE B 482	29.350 71.353 142.339 1.00 49.20	O
ATOM 3261 CB ILE B 482	28.917 68.898 144.435 1.00 49.88	C
ATOM 3262 CG1 ILE B 482	29.455 68.527 145.825 1.00 50.32	C
ATOM 3263 CG2 ILE B 482	29.934 68.446 143.417 1.00 49.96	C
ATOM 3264 CD1 ILE B 482	28.834 67.247 146.349 1.00 51.02	C
ATOM 3265 N THR B 483	27.150 71.008 142.600 1.00 48.40	N
ATOM 3266 CA THR B 483	26.874 71.594 141.288 1.00 49.74	C
ATOM 3267 C THR B 483	27.393 73.030 141.196 1.00 51.14	C
ATOM 3268 O THR B 483	28.129 73.405 140.265 1.00 51.11	O
ATOM 3269 CB THR B 483	25.368 71.577 141.003 1.00 48.94	C
ATOM 3270 OG1 THR B 483	25.050 70.188 140.912 1.00 49.10	O
ATOM 3271 CG2 THR B 483	25.071 72.316 139.717 1.00 49.01	C
ATOM 3272 N ASP B 484	27.017 73.834 142.213 1.00 51.19	N
ATOM 3273 CA ASP B 484	27.476 75.218 142.294 1.00 50.56	C
ATOM 3274 C ASP B 484	29.002 75.268 142.245 1.00 50.46	C
ATOM 3275 O ASP B 484	29.605 76.073 141.522 1.00 51.67	O
ATOM 3276 CB ASP B 484	27.001 75.898 143.558 1.00 50.97	C
ATOM 3277 CG ASP B 484	25.487 76.070 143.586 1.00 53.30	C
ATOM 3278 OD1 ASP B 484	24.853 75.982 142.497 1.00 53.11	O

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ATOM 3279	OD2 ASP B 484	24.940 76.307 144.717 1.00 53.76	O
ATOM 3280	N THR B 485	29.694 74.386 142.956 1.00 49.24	N
ATOM 3281	CA THR B 485	31.154 74.396 142.907 1.00 49.60	C
ATOM 3282	C THR B 485	31.680 74.196 141.495 1.00 50.42	C
ATOM 3283	O THR B 485	32.684 74.791 141.087 1.00 50.51	O
ATOM 3284	CB THR B 485	31.664 73.271 143.835 1.00 48.97	C
ATOM 3285	OG1 THR B 485	30.967 73.451 145.080 1.00 47.88	O
ATOM 3286	CG2 THR B 485	33.176 73.286 143.960 1.00 47.44	C
ATOM 3287	N LEU B 486	31.002 73.328 140.741 1.00 51.30	N
ATOM 3288	CA LEU B 486	31.433 73.036 139.368 1.00 51.82	C
ATOM 3289	C LEU B 486	31.339 74.277 138.479 1.00 52.24	C
ATOM 3290	O LEU B 486	32.257 74.683 137.774 1.00 50.69	O
ATOM 3291	CB LEU B 486	30.573 71.907 138.761 1.00 49.64	C
ATOM 3292	CG LEU B 486	31.218 70.532 138.888 1.00 48.31	C
ATOM 3293	CD1 LEU B 486	30.237 69.504 138.358 1.00 48.07	C
ATOM 3294	CD2 LEU B 486	32.555 70.536 138.164 1.00 47.39	C
ATOM 3295	N ILE B 487	30.147 74.897 138.557 1.00 53.50	N
ATOM 3296	CA ILE B 487	29.921 76.092 137.754 1.00 55.16	C
ATOM 3297	C ILE B 487	30.953 77.157 138.134 1.00 57.21	C
ATOM 3298	O ILE B 487	31.609 77.809 137.322 1.00 57.31	O
ATOM 3299	CB ILE B 487	28.510 76.631 137.978 1.00 54.14	C
ATOM 3300	CG1 ILE B 487	27.457 75.695 137.432 1.00 54.26	C
ATOM 3301	CG2 ILE B 487	28.458 77.994 137.316 1.00 55.14	C
ATOM 3302	CD1 ILE B 487	27.219 75.771 135.943 1.00 54.81	C
ATOM 3303	N HIS B 488	31.105 77.327 139.446 1.00 58.96	N
ATOM 3304	CA HIS B 488	32.052 78.277 139.982 1.00 60.55	C
ATOM 3305	C HIS B 488	33.385 78.041 139.302 1.00 60.12	C
ATOM 3306	O HIS B 488	33.987 78.945 138.743 1.00 61.16	O
ATOM 3307	CB HIS B 488	32.201 78.053 141.481 1.00 63.98	C
ATOM 3308	CG HIS B 488	33.356 78.861 142.005 1.00 67.76	C
ATOM 3309	ND1 HIS B 488	33.313 80.239 142.060 1.00 68.99	N
ATOM 3310	CD2 HIS B 488	34.573 78.457 142.475 1.00 69.21	C
ATOM 3311	CE1 HIS B 488	34.481 80.641 142.565 1.00 70.75	C
ATOM 3312	NE2 HIS B 488	35.266 79.590 142.831 1.00 70.44	N
ATOM 3313	N LEU B 489	33.870 76.808 139.343 1.00 59.86	N
ATOM 3314	CA LEU B 489	35.140 76.503 138.700 1.00 60.03	C
ATOM 3315	C LEU B 489	35.214 76.966 137.242 1.00 60.16	C
ATOM 3316	O LEU B 489	36.162 77.570 136.755 1.00 58.98	O
ATOM 3317	CB LEU B 489	35.311 74.975 138.755 1.00 58.86	C
ATOM 3318	CG LEU B 489	35.797 74.471 140.096 1.00 59.40	C
ATOM 3319	CD1 LEU B 489	35.741 72.942 140.083 1.00 60.90	C
ATOM 3320	CD2 LEU B 489	37.209 74.937 140.395 1.00 59.49	C
ATOM 3321	N MET B 490	34.193 76.643 136.465 1.00 61.21	N
ATOM 3322	CA MET B 490	34.106 76.937 135.052 1.00 62.35	C
ATOM 3323	C MET B 490	34.095 78.425 134.725 1.00 62.90	C

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ATOM 3324 O MET B 490	34.731 78.867 133.768 1.00 62.67	O
ATOM 3325 CB MET B 490	32.807 76.321 134.000 1.00 62.53	C
ATOM 3326 CG MET B 490	33.018 74.922 133.939 1.00 62.79	C
ATOM 3327 SD MET B 490	31.400 74.130 133.827 1.00 64.70	S
ATOM 3328 CE MET B 490	31.840 72.442 134.233 1.00 63.89	C
ATOM 3329 N ALA B 491	33.336 79.163 135.541 1.00 63.19	N
ATOM 3330 CA ALA B 491	33.245 80.608 135.353 1.00 63.40	C
ATOM 3331 C ALA B 491	34.665 81.115 135.583 1.00 63.75	C
ATOM 3332 O ALA B 491	35.219 81.807 134.739 1.00 63.44	O
ATOM 3333 CB ALA B 491	32.252 81.242 136.296 1.00 63.10	C
ATOM 3334 N LYS B 492	35.288 80.683 136.678 1.00 64.63	N
ATOM 3335 CA LYS B 492	36.662 81.082 136.954 1.00 66.16	C
ATOM 3336 C LYS B 492	37.545 80.773 135.765 1.00 66.57	C
ATOM 3337 O LYS B 492	38.458 81.559 135.514 1.00 68.67	O
ATOM 3338 CB LYS B 492	37.235 80.489 138.236 1.00 66.65	C
ATOM 3343 N ALA B 493	37.346 79.758 134.952 1.00 67.06	N
ATOM 3344 CA ALA B 493	38.181 79.515 133.784 1.00 68.05	C
ATOM 3345 C ALA B 493	37.649 80.371 132.632 1.00 69.31	C
ATOM 3346 O ALA B 493	38.043 80.265 131.472 1.00 70.45	O
ATOM 3347 CB ALA B 493	38.217 78.061 133.355 1.00 67.81	C
ATOM 3348 N GLY B 494	36.705 81.254 132.897 1.00 69.82	N
ATOM 3349 CA GLY B 494	36.112 82.145 131.941 1.00 70.15	C
ATOM 3350 C GLY B 494	35.391 81.444 130.819 1.00 70.48	C
ATOM 3351 O GLY B 494	35.767 81.599 129.655 1.00 72.21	O
ATOM 3352 N LEU B 495	34.359 80.656 131.074 1.00 70.34	N
ATOM 3353 CA LEU B 495	33.646 80.047 129.944 1.00 69.20	C
ATOM 3354 C LEU B 495	32.365 80.888 129.907 1.00 68.78	C
ATOM 3355 O LEU B 495	31.928 81.311 130.977 1.00 67.73	O
ATOM 3356 CB LEU B 495	33.255 78.597 130.088 1.00 68.95	C
ATOM 3357 CG LEU B 495	34.298 77.596 130.577 1.00 69.01	C
ATOM 3358 CD1 LEU B 495	33.750 76.182 130.417 1.00 69.36	C
ATOM 3359 CD2 LEU B 495	35.598 77.732 129.809 1.00 69.12	C
ATOM 3360 N THR B 496	31.817 81.101 128.735 1.00 69.23	N
ATOM 3361 CA THR B 496	30.574 81.867 128.685 1.00 70.03	C
ATOM 3362 C THR B 496	29.554 81.192 129.572 1.00 70.46	C
ATOM 3363 O THR B 496	29.688 80.016 129.897 1.00 71.40	O
ATOM 3364 CB THR B 496	29.987 81.709 127.275 1.00 70.86	C
ATOM 3365 OG1 THR B 496	30.999 82.069 126.332 1.00 72.15	O
ATOM 3366 CG2 THR B 496	28.731 82.529 127.084 1.00 72.22	C
ATOM 3367 N LEU B 497	28.476 81.872 129.917 1.00 71.30	N
ATOM 3368 CA LEU B 497	27.413 81.282 130.717 1.00 71.94	C
ATOM 3369 C LEU B 497	26.818 80.089 129.961 1.00 72.66	C
ATOM 3370 O LEU B 497	26.362 79.078 130.509 1.00 72.74	O
ATOM 3371 CB LEU B 497	26.361 82.336 130.938 1.00 73.14	C
ATOM 3372 CG LEU B 497	25.737 82.520 132.308 1.00 75.05	C

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ATOM 3373	CD1 LEU B 497	24.213 82.497 132.169 1.00 75.56	C
ATOM 3374	CD2 LEU B 497	26.223 81.553 133.368 1.00 75.08	C
ATOM 3375	N GLN B 498	26.801 80.172 128.628 1.00 73.15	N
ATOM 3376	CA GLN B 498	26.286 79.097 127.802 1.00 73.20	C
ATOM 3377	C GLN B 498	27.304 77.965 127.748 1.00 71.99	C
ATOM 3378	O GLN B 498	26.873 76.805 127.766 1.00 73.27	O
ATOM 3379	CB GLN B 498	25.909 79.531 126.397 1.00 75.34	C
ATOM 3380	CG GLN B 498	25.953 78.364 125.417 1.00 78.94	C
ATOM 3381	CD GLN B 498	25.355 78.648 124.062 1.00 81.48	C
ATOM 3382	OE1 GLN B 498	24.595 77.837 123.510 1.00 82.87	O
ATOM 3383	NE2 GLN B 498	25.686 79.809 123.489 1.00 82.87	N
ATOM 3384	N GLN B 499	28.602 78.215 127.695 1.00 69.54	N
ATOM 3385	CA GLN B 499	29.551 77.094 127.692 1.00 67.99	C
ATOM 3386	C GLN B 499	29.514 76.401 129.062 1.00 66.82	C
ATOM 3387	O GLN B 499	29.697 75.198 129.245 1.00 66.87	O
ATOM 3388	CB GLN B 499	30.965 77.605 127.473 1.00 68.69	C
ATOM 3389	CG GLN B 499	30.951 78.798 126.524 1.00 70.30	C
ATOM 3390	CD GLN B 499	32.354 79.028 126.007 1.00 71.96	C
ATOM 3391	OE1 GLN B 499	33.200 79.505 126.773 1.00 73.64	O
ATOM 3392	NE2 GLN B 499	32.534 78.653 124.749 1.00 72.63	N
ATOM 3393	N GLN B 500	29.260 77.202 130.100 1.00 64.43	N
ATOM 3394	CA GLN B 500	29.153 76.673 131.436 1.00 62.40	C
ATOM 3395	C GLN B 500	28.025 75.641 131.437 1.00 60.46	C
ATOM 3396	O GLN B 500	28.339 74.482 131.749 1.00 60.49	O
ATOM 3397	CB GLN B 500	28.855 77.755 132.459 1.00 62.93	C
ATOM 3398	CG GLN B 500	30.091 78.493 132.957 1.00 63.99	C
ATOM 3399	CD GLN B 500	29.637 79.803 133.582 1.00 65.12	C
ATOM 3400	OE1 GLN B 500	28.785 79.839 134.472 1.00 65.59	O
ATOM 3401	NE2 GLN B 500	30.208 80.896 133.098 1.00 65.97	N
ATOM 3402	N HIS B 501	26.791 76.028 131.071 1.00 57.49	N
ATOM 3403	CA HIS B 501	25.743 74.994 131.086 1.00 55.77	C
ATOM 3404	C HIS B 501	25.983 73.824 130.128 1.00 55.13	C
ATOM 3405	O HIS B 501	25.543 72.698 130.416 1.00 55.20	O
ATOM 3406	CB HIS B 501	24.363 75.550 130.938 1.00 55.37	C
ATOM 3407	CG AHIS B 501	23.935 76.140 129.646 0.50 55.16	C
ATOM 3408	CG BHIS B 501	24.021 76.821 131.635 0.50 55.88	C
ATOM 3409	ND1AHIS B 501	23.174 77.302 129.600 0.50 55.27	N
ATOM 3410	ND1BHIS B 501	24.177 76.981 132.992 0.50 56.03	N
ATOM 3411	CD2AHIS B 501	24.110 75.752 128.363 0.50 54.82	C
ATOM 3412	CD2BHIS B 501	23.524 77.993 131.170 0.50 55.80	C
ATOM 3413	CE1AHIS B 501	22.917 77.598 128.336 0.50 54.98	C
ATOM 3414	CE1BHIS B 501	23.800 78.200 133.332 0.50 56.19	C
ATOM 3415	NE2AHIS B 501	23.477 76.674 127.566 0.50 54.81	N
ATOM 3416	NE2BHIS B 501	23.403 78.836 132.241 0.50 56.01	N
ATOM 3417	N GLN B 502	26.669 73.995 129.009 1.00 53.45	N

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ATOM	3418	CA	GLN B 502	26.940	72.871	128.127	1.00	52.90	C
ATOM	3419	C	GLN B 502	27.942	71.918	128.772	1.00	52.22	C
ATOM	3420	O	GLN B 502	27.647	70.721	128.922	1.00	51.61	O
ATOM	3421	CB	GLN B 502	27.422	73.419	126.787	1.00	54.22	C
ATOM	3422	CG	GLN B 502	26.373	74.342	126.184	1.00	55.11	C
ATOM	3423	CD	GLN B 502	26.499	74.615	124.704	1.00	54.93	C
ATOM	3424	OE1	GLN B 502	27.619	74.599	124.169	1.00	55.67	O
ATOM	3425	NE2	GLN B 502	25.343	74.862	124.089	1.00	53.79	N
ATOM	3426	N	ARG B 503	29.108	72.384	129.218	1.00	50.84	N
ATOM	3427	CA	ARG B 503	30.092	71.560	129.898	1.00	48.49	C
ATOM	3428	C	ARG B 503	29.463	70.800	131.069	1.00	48.40	C
ATOM	3429	O	ARG B 503	29.729	69.604	131.216	1.00	49.87	O
ATOM	3430	CB	ARG B 503	31.217	72.421	130.495	1.00	47.02	C
ATOM	3431	CG	ARG B 503	32.435	71.558	130.785	1.00	47.10	C
ATOM	3432	CD	ARG B 503	33.700	72.366	130.968	1.00	45.82	C
ATOM	3433	NE	ARG B 503	34.788	71.588	131.542	1.00	45.26	N
ATOM	3434	CZ	ARG B 503	35.665	70.918	130.815	1.00	46.26	C
ATOM	3435	NH1	ARG B 503	35.568	70.910	129.493	1.00	46.31	N
ATOM	3436	NH2	ARG B 503	36.669	70.235	131.366	1.00	47.52	N
ATOM	3437	N	LEU B 504	28.644	71.462	131.888	1.00	46.45	N
ATOM	3438	CA	LEU B 504	28.023	70.802	133.014	1.00	45.17	C
ATOM	3439	C	LEU B 504	27.339	69.548	132.495	1.00	46.22	C
ATOM	3440	O	LEU B 504	27.695	68.426	132.869	1.00	47.23	O
ATOM	3441	CB	LEU B 504	27.017	71.705	133.720	1.00	43.90	C
ATOM	3442	CG	LEU B 504	26.422	71.152	135.018	1.00	43.02	C
ATOM	3443	CD1	LEU B 504	27.484	70.796	136.035	1.00	42.09	C
ATOM	3444	CD2	LEU B 504	25.434	72.161	135.603	1.00	42.49	C
ATOM	3445	N	ALA B 505	26.384	69.771	131.586	1.00	46.57	N
ATOM	3446	CA	ALA B 505	25.639	68.658	130.986	1.00	45.30	C
ATOM	3447	C	ALA B 505	26.622	67.677	130.371	1.00	46.91	C
ATOM	3448	O	ALA B 505	26.518	66.469	130.660	1.00	48.20	O
ATOM	3449	CB	ALA B 505	24.658	69.248	130.021	1.00	44.08	C
ATOM	3450	N	GLN B 506	27.629	68.077	129.585	1.00	47.50	N
ATOM	3451	CA	GLN B 506	28.566	67.094	129.051	1.00	47.74	C
ATOM	3452	C	GLN B 506	29.206	66.326	130.190	1.00	48.34	C
ATOM	3453	O	GLN B 506	29.273	65.098	130.031	1.00	50.56	O
ATOM	3454	CB	GLN B 506	29.642	67.637	128.122	1.00	48.83	C
ATOM	3455	CG	AGLN B 506	29.324	68.944	127.440	0.50	49.79	C
ATOM	3456	CG	BGLN B 506	29.073	68.052	126.764	0.50	49.57	C
ATOM	3457	CD	AGLN B 506	30.244	69.417	126.351	0.50	50.30	C
ATOM	3458	CD	BGLN B 506	28.599	66.920	125.870	0.50	49.56	C
ATOM	3459	OE1	AGLN B 506	31.471	69.382	126.470	0.50	50.66	O
ATOM	3460	OE1	BGLN B 506	29.020	65.770	126.068	0.50	50.14	O
ATOM	3461	NE2	AGLN B 506	29.672	69.881	125.241	0.50	50.69	N
ATOM	3462	NE2	BGLN B 506	27.744	67.233	124.896	0.50	48.23	N

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ATOM	3463	N	LEU B 507	29.637	66.940	131.278	1.00	48.08	N
ATOM	3464	CA	LEU B 507	30.249	66.175	132.359	1.00	48.18	C
ATOM	3465	C	LEU B 507	29.274	65.201	132.999	1.00	47.50	C
ATOM	3466	O	LEU B 507	29.611	64.010	133.075	1.00	49.50	O
ATOM	3467	CB	LEU B 507	30.821	67.077	133.452	1.00	49.39	C
ATOM	3468	CG	LEU B 507	32.048	67.900	133.026	1.00	50.17	C
ATOM	3469	CD1	LEU B 507	32.468	68.844	134.135	1.00	49.83	C
ATOM	3470	CD2	LEU B 507	33.163	66.965	132.590	1.00	50.59	C
ATOM	3471	N	LEU B 508	28.108	65.661	133.416	1.00	45.18	N
ATOM	3472	CA	LEU B 508	27.146	64.743	134.024	1.00	44.33	C
ATOM	3473	C	LEU B 508	26.695	63.653	133.076	1.00	44.72	C
ATOM	3474	O	LEU B 508	26.456	62.520	133.573	1.00	46.18	O
ATOM	3475	CB	LEU B 508	25.969	65.562	134.561	1.00	43.86	C
ATOM	3476	CG	LEU B 508	26.418	66.604	135.595	1.00	44.31	C
ATOM	3477	CD1	LEU B 508	25.304	67.481	136.094	1.00	44.65	C
ATOM	3478	CD2	LEU B 508	27.001	65.893	136.814	1.00	46.31	C
ATOM	3479	N	LEU B 509	26.631	63.860	131.740	1.00	42.70	N
ATOM	3480	CA	LEU B 509	26.188	62.738	130.907	1.00	41.76	C
ATOM	3481	C	LEU B 509	27.166	61.568	130.901	1.00	42.73	C
ATOM	3482	O	LEU B 509	26.750	60.415	130.677	1.00	42.98	O
ATOM	3483	CB	LEU B 509	25.771	63.111	129.500	1.00	39.78	C
ATOM	3484	CG	LEU B 509	24.498	63.933	129.331	1.00	39.38	C
ATOM	3485	CD1	LEU B 509	24.376	64.378	127.887	1.00	39.53	C
ATOM	3486	CD2	LEU B 509	23.261	63.183	129.768	1.00	38.89	C
ATOM	3487	N	ILE B 510	28.452	61.794	131.175	1.00	42.74	N
ATOM	3488	CA	ILE B 510	29.430	60.702	131.201	1.00	42.35	C
ATOM	3489	C	ILE B 510	29.081	59.803	132.385	1.00	41.76	C
ATOM	3490	O	ILE B 510	29.280	58.577	132.334	1.00	41.62	O
ATOM	3491	CB	ILE B 510	30.874	61.227	131.277	1.00	42.40	C
ATOM	3492	CG1	ILE B 510	31.414	61.613	129.902	1.00	43.54	C
ATOM	3493	CG2	ILE B 510	31.861	60.190	131.777	1.00	42.50	C
ATOM	3494	CD1	ILE B 510	32.106	62.960	129.894	1.00	45.42	C
ATOM	3495	N	LEU B 511	28.525	60.389	133.451	1.00	40.66	N
ATOM	3496	CA	LEU B 511	28.170	59.585	134.616	1.00	42.25	C
ATOM	3497	C	LEU B 511	27.297	58.398	134.249	1.00	42.82	C
ATOM	3498	O	LEU B 511	27.463	57.267	134.735	1.00	43.36	O
ATOM	3499	CB	LEU B 511	27.601	60.448	135.730	1.00	42.09	C
ATOM	3500	CG	LEU B 511	28.535	61.542	136.285	1.00	41.35	C
ATOM	3501	CD1	LEU B 511	27.865	62.131	137.519	1.00	41.68	C
ATOM	3502	CD2	LEU B 511	29.923	61.032	136.646	1.00	39.19	C
ATOM	3503	N	SER B 512	26.357	58.553	133.328	1.00	42.90	N
ATOM	3504	CA	SER B 512	25.559	57.466	132.826	1.00	42.26	C
ATOM	3505	C	SER B 512	26.408	56.302	132.306	1.00	42.66	C
ATOM	3506	O	SER B 512	26.211	55.124	132.655	1.00	43.46	O
ATOM	3507	CB	SER B 512	24.841	57.983	131.565	1.00	43.15	C

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ATOM 3508	OG SER B 512	23.520 57.542 131.889 1.00 47.88	O
ATOM 3509	N HIS B 513	27.391 56.628 131.447 1.00 40.64	N
ATOM 3510	CA HIS B 513	28.293 55.637 130.891 1.00 38.32	C
ATOM 3511	C HIS B 513	29.054 54.967 132.014 1.00 38.98	C
ATOM 3512	O HIS B 513	29.171 53.717 132.070 1.00 38.69	O
ATOM 3513	CB HIS B 513	29.213 56.257 129.837 1.00 37.80	C
ATOM 3514	CG AHIS B 513	28.243 56.630 128.743 0.50 39.03	C
ATOM 3515	CG BHIS B 513	30.042 55.243 129.114 0.50 38.57	C
ATOM 3516	ND1AHIS B 513	27.901 57.941 128.488 0.50 39.85	N
ATOM 3517	ND1BHIS B 513	31.397 55.357 128.900 0.50 38.03	N
ATOM 3518	CD2AHIS B 513	27.500 55.878 127.897 0.50 39.27	C
ATOM 3519	CD2BHIS B 513	29.681 54.062 128.539 0.50 39.21	C
ATOM 3520	CE1AHIS B 513	26.956 57.970 127.547 0.50 39.34	C
ATOM 3521	CE1BHIS B 513	31.827 54.303 128.236 0.50 38.20	C
ATOM 3522	NE2AHIS B 513	26.749 56.742 127.129 0.50 39.14	N
ATOM 3523	NE2BHIS B 513	30.816 53.493 128.004 0.50 38.80	N
ATOM 3524	N ILE B 514	29.512 55.773 132.981 1.00 38.11	N
ATOM 3525	CA ILE B 514	30.206 55.125 134.117 1.00 38.58	C
ATOM 3526	C ILE B 514	29.258 54.158 134.812 1.00 38.82	C
ATOM 3527	O ILE B 514	29.626 53.008 135.127 1.00 38.63	O
ATOM 3528	CB ILE B 514	30.833 56.188 135.014 1.00 38.42	C
ATOM 3529	CG1 ILE B 514	32.076 56.750 134.298 1.00 38.90	C
ATOM 3530	CG2 ILE B 514	31.231 55.662 136.378 1.00 38.33	C
ATOM 3531	CD1 ILE B 514	32.304 58.207 134.668 1.00 38.65	C
ATOM 3532	N ARG B 515	27.992 54.541 135.028 1.00 38.89	N
ATOM 3533	CA ARG B 515	27.068 53.607 135.663 1.00 39.77	C
ATOM 3534	C ARG B 515	27.027 52.335 134.818 1.00 39.60	C
ATOM 3535	O ARG B 515	27.242 51.245 135.348 1.00 39.52	O
ATOM 3536	CB ARG B 515	25.652 54.155 135.785 1.00 41.28	C
ATOM 3537	CG ARG B 515	24.686 53.327 136.638 1.00 41.79	C
ATOM 3538	CD ARG B 515	25.233 53.322 138.037 1.00 45.04	C
ATOM 3539	NE ARG B 515	24.244 53.327 139.112 1.00 48.29	N
ATOM 3540	CZ ARG B 515	23.588 54.449 139.447 1.00 49.73	C
ATOM 3541	NH1 ARG B 515	23.832 55.586 138.792 1.00 50.32	N
ATOM 3542	NH2 ARG B 515	22.702 54.415 140.426 1.00 49.29	N
ATOM 3543	N HIS B 516	26.762 52.537 133.517 1.00 38.70	N
ATOM 3544	CA HIS B 516	26.695 51.411 132.602 1.00 38.48	C
ATOM 3545	C HIS B 516	27.880 50.470 132.698 1.00 38.57	C
ATOM 3546	O HIS B 516	27.713 49.274 132.875 1.00 36.91	O
ATOM 3547	CB HIS B 516	26.560 51.931 131.167 1.00 40.24	C
ATOM 3548	CG HIS B 516	26.354 50.738 130.251 1.00 41.06	C
ATOM 3549	ND1 HIS B 516	25.173 50.053 130.179 1.00 40.24	N
ATOM 3550	CD2 HIS B 516	27.202 50.108 129.400 1.00 41.00	C
ATOM 3551	CE1 HIS B 516	25.303 49.066 129.336 1.00 39.65	C
ATOM 3552	NE2 HIS B 516	26.514 49.070 128.834 1.00 39.98	N

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ATOM 3553 N MET B 517	29.102 50.984 132.602 1.00 40.61	N
ATOM 3554 CA MET B 517	30.341 50.227 132.704 1.00 41.77	C
ATOM 3555 C MET B 517	30.489 49.440 133.998 1.00 42.00	C
ATOM 3556 O MET B 517	30.894 48.283 134.051 1.00 41.42	O
ATOM 3557 CB MET B 517	31.525 51.198 132.723 1.00 42.99	C
ATOM 3558 CG MET B 517	32.313 51.172 131.425 1.00 45.13	C
ATOM 3559 SD MET B 517	33.516 52.536 131.360 1.00 46.85	S
ATOM 3560 CE MET B 517	32.400 53.916 131.339 1.00 48.12	C
ATOM 3561 N SER B 518	30.140 50.131 135.092 1.00 42.51	N
ATOM 3562 CA SER B 518	30.228 49.515 136.415 1.00 42.93	C
ATOM 3563 C SER B 518	29.290 48.320 136.489 1.00 42.97	C
ATOM 3564 O SER B 518	29.653 47.306 137.096 1.00 42.01	O
ATOM 3565 CB SER B 518	29.912 50.557 137.469 1.00 43.94	C
ATOM 3566 OG SER B 518	29.230 50.022 138.586 1.00 45.24	O
ATOM 3567 N ASN B 519	28.112 48.471 135.868 1.00 43.73	N
ATOM 3568 CA ASN B 519	27.136 47.379 135.882 1.00 45.19	C
ATOM 3569 C ASN B 519	27.767 46.200 135.165 1.00 46.03	C
ATOM 3570 O ASN B 519	27.778 45.109 135.716 1.00 47.02	O
ATOM 3571 CB ASN B 519	25.804 47.805 135.291 1.00 46.66	C
ATOM 3572 CG ASN B 519	24.993 48.638 136.263 1.00 49.48	C
ATOM 3573 OD1 ASN B 519	25.089 48.397 137.490 1.00 51.53	O
ATOM 3574 ND2 ASN B 519	24.208 49.617 135.798 1.00 49.53	N
ATOM 3575 N LYS B 520	28.347 46.392 133.986 1.00 46.49	N
ATOM 3576 CA LYS B 520	29.000 45.306 133.272 1.00 46.97	C
ATOM 3577 C LYS B 520	30.174 44.793 134.099 1.00 46.60	C
ATOM 3578 O LYS B 520	30.331 43.573 134.240 1.00 47.54	O
ATOM 3579 CB LYS B 520	29.523 45.785 131.920 1.00 48.14	C
ATOM 3580 CG LYS B 520	28.432 46.661 131.298 1.00 50.82	C
ATOM 3581 CD LYS B 520	27.655 45.791 130.346 1.00 54.22	C
ATOM 3582 CE LYS B 520	26.190 45.599 130.698 1.00 56.72	C
ATOM 3583 NZ LYS B 520	25.690 44.401 129.918 1.00 58.52	N
ATOM 3584 N GLY B 521	30.957 45.705 134.659 1.00 44.61	N
ATOM 3585 CA GLY B 521	32.043 45.239 135.494 1.00 45.54	C
ATOM 3586 C GLY B 521	31.596 44.324 136.628 1.00 46.50	C
ATOM 3587 O GLY B 521	32.325 43.332 136.830 1.00 46.54	O
ATOM 3588 N MET B 522	30.503 44.577 137.382 1.00 46.75	N
ATOM 3589 CA MET B 522	30.195 43.644 138.449 1.00 47.80	C
ATOM 3590 C MET B 522	29.807 42.299 137.819 1.00 48.57	C
ATOM 3591 O MET B 522	30.240 41.253 138.299 1.00 49.08	O
ATOM 3592 CB MET B 522	29.062 43.838 139.401 1.00 48.14	C
ATOM 3593 CG MET B 522	28.578 45.083 140.019 1.00 48.74	C
ATOM 3594 SD MET B 522	29.593 45.740 141.330 1.00 50.47	S
ATOM 3595 CE MET B 522	30.303 44.236 141.989 1.00 48.09	C
ATOM 3596 N GLU B 523	28.988 42.406 136.780 1.00 50.12	N
ATOM 3597 CA GLU B 523	28.571 41.169 136.107 1.00 51.27	C

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ATOM	3598	C	GLU B 523	29.801	40.335	135.793	1.00	48.34	C
ATOM	3599	O	GLU B 523	29.842	39.152	136.111	1.00	48.80	O
ATOM	3600	CB	GLU B 523	27.693	41.477	134.926	1.00	56.32	C
ATOM	3601	CG	GLU B 523	26.222	41.586	135.253	1.00	63.90	C
ATOM	3602	CD	GLU B 523	25.669	40.410	136.046	1.00	69.58	C
ATOM	3603	OE1	GLU B 523	26.274	39.292	136.084	1.00	72.07	O
ATOM	3604	OE2	GLU B 523	24.573	40.579	136.664	1.00	72.34	O
ATOM	3605	N	HIS B 524	30.835	40.904	135.228	1.00	45.16	N
ATOM	3606	CA	HIS B 524	32.042	40.187	134.925	1.00	44.63	C
ATOM	3607	C	HIS B 524	32.786	39.694	136.136	1.00	45.63	C
ATOM	3608	O	HIS B 524	33.174	38.530	136.210	1.00	46.13	O
ATOM	3609	CB	HIS B 524	32.941	41.153	134.131	1.00	44.39	C
ATOM	3610	CG	HIS B 524	34.264	40.554	133.809	1.00	45.05	C
ATOM	3611	ND1	HIS B 524	35.340	40.624	134.677	1.00	46.06	N
ATOM	3612	CD2	HIS B 524	34.689	39.871	132.727	1.00	45.55	C
ATOM	3613	CE1	HIS B 524	36.379	40.011	134.130	1.00	46.99	C
ATOM	3614	NE2	HIS B 524	36.014	39.538	132.934	1.00	46.65	N
ATOM	3615	N	LEU B 525	33.040	40.541	137.136	1.00	47.40	N
ATOM	3616	CA	LEU B 525	33.838	40.173	138.305	1.00	48.66	C
ATOM	3617	C	LEU B 525	33.186	38.970	138.973	1.00	51.45	C
ATOM	3618	O	LEU B 525	33.801	38.061	139.503	1.00	51.39	O
ATOM	3619	CB	LEU B 525	34.009	41.328	139.283	1.00	47.23	C
ATOM	3620	CG	LEU B 525	34.669	40.941	140.610	1.00	46.40	C
ATOM	3621	CD1	LEU B 525	36.099	40.533	140.321	1.00	46.02	C
ATOM	3622	CD2	LEU B 525	34.591	42.051	141.634	1.00	46.06	C
ATOM	3623	N	TYR B 526	31.860	39.006	138.936	1.00	54.54	N
ATOM	3624	CA	TYR B 526	31.029	37.963	139.465	1.00	58.05	C
ATOM	3625	C	TYR B 526	31.236	36.681	138.674	1.00	59.70	C
ATOM	3626	O	TYR B 526	31.383	35.663	139.357	1.00	60.78	O
ATOM	3627	CB	TYR B 526	29.591	38.447	139.352	1.00	60.78	C
ATOM	3628	CG	TYR B 526	28.713	37.388	139.962	1.00	64.37	C
ATOM	3629	CD1	TYR B 526	28.504	37.370	141.319	1.00	66.32	C
ATOM	3630	CD2	TYR B 526	28.117	36.424	139.178	1.00	66.84	C
ATOM	3631	CE1	TYR B 526	27.700	36.427	141.916	1.00	68.78	C
ATOM	3632	CE2	TYR B 526	27.300	35.457	139.738	1.00	69.50	C
ATOM	3633	CZ	TYR B 526	27.112	35.477	141.106	1.00	70.89	C
ATOM	3634	OH	TYR B 526	26.313	34.509	141.697	1.00	74.25	O
ATOM	3635	N	SER B 527	31.261	36.673	137.336	1.00	60.47	N
ATOM	3636	CA	SER B 527	31.498	35.385	136.667	1.00	61.49	C
ATOM	3637	C	SER B 527	32.948	35.014	136.945	1.00	61.49	C
ATOM	3638	O	SER B 527	33.157	33.877	137.371	1.00	62.15	O
ATOM	3639	CB	SER B 527	31.192	35.377	135.188	1.00	62.44	C
ATOM	3640	OG	SER B 527	31.689	36.588	134.634	1.00	63.98	O
ATOM	3641	N	MET B 528	33.911	35.911	136.843	1.00	61.64	N
ATOM	3642	CA	MET B 528	35.281	35.555	137.196	1.00	63.8°	C

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ATOM	3643	C	MET B 528	35.329	34.828	138.542	1.00	64.80	C
ATOM	3644	O	MET B 528	36.067	33.868	138.753	1.00	63.49	O
ATOM	3645	CB	MET B 528	36.167	36.800	137.243	1.00	64.77	C
ATOM	3646	CG	MET B 528	36.878	37.227	135.984	1.00	65.29	C
ATOM	3647	SD	MET B 528	37.201	35.912	134.760	1.00	66.35	S
ATOM	3648	CE	MET B 528	35.670	36.008	133.820	1.00	65.10	C
ATOM	3649	N	LYS B 529	34.553	35.264	139.522	1.00	67.52	N
ATOM	3650	CA	LYS B 529	34.492	34.654	140.833	1.00	70.80	C
ATOM	3651	C	LYS B 529	33.860	33.273	140.754	1.00	72.85	C
ATOM	3652	O	LYS B 529	34.298	32.357	141.450	1.00	73.96	O
ATOM	3653	CB	LYS B 529	33.705	35.538	141.795	1.00	71.14	C
ATOM	3654	CG	LYS B 529	32.734	34.819	142.692	1.00	72.73	C
ATOM	3655	CD	LYS B 529	32.855	35.292	144.119	1.00	75.27	C
ATOM	3656	CE	LYS B 529	31.706	34.773	144.975	1.00	77.62	C
ATOM	3657	NZ	LYS B 529	30.380	34.816	144.286	1.00	78.57	N
ATOM	3658	N	CYS B 530	32.815	33.113	139.964	1.00	75.23	N
ATOM	3659	CA	CYS B 530	32.150	31.817	139.833	1.00	78.47	C
ATOM	3660	C	CYS B 530	33.059	30.823	139.165	1.00	80.04	C
ATOM	3661	O	CYS B 530	33.123	29.653	139.549	1.00	81.22	O
ATOM	3662	CB	CYS B 530	30.800	32.058	139.165	1.00	79.44	C
ATOM	3663	SG	ACYS B 530	29.756	32.972	140.357	0.50	80.86	S
ATOM	3664	SG	BCYS B 530	29.435	31.171	139.942	0.50	81.98	S
ATOM	3665	N	LYS B 531	33.878	31.218	138.207	1.00	81.81	N
ATOM	3666	CA	LYS B 531	34.846	30.378	137.528	1.00	83.72	C
ATOM	3667	C	LYS B 531	36.034	30.069	138.439	1.00	85.03	C
ATOM	3668	O	LYS B 531	37.009	29.407	138.089	1.00	85.56	O
ATOM	3669	CB	LYS B 531	35.405	31.112	136.302	1.00	84.17	C
ATOM	3670	CG	LYS B 531	34.640	30.945	135.014	1.00	85.13	C
ATOM	3671	CD	LYS B 531	33.167	31.305	135.153	1.00	86.04	C
ATOM	3674	N	ASN B 532	36.050	30.578	139.651	1.00	86.77	N
ATOM	3675	CA	ASN B 532	37.099	30.391	140.629	1.00	88.41	C
ATOM	3676	C	ASN B 532	38.429	30.832	140.066	1.00	87.48	C
ATOM	3677	O	ASN B 532	39.358	30.052	139.939	1.00	88.95	O
ATOM	3678	CB	ASN B 532	37.128	28.922	141.046	1.00	91.42	C
ATOM	3679	CG	ASN B 532	35.880	28.573	141.848	1.00	94.45	C
ATOM	3680	OD1	ASN B 532	35.454	29.327	142.741	1.00	95.85	O
ATOM	3681	ND2	ASN B 532	35.297	27.420	141.516	1.00	95.63	N
ATOM	3682	N	VAL B 533	38.555	32.084	139.686	1.00	86.02	N
ATOM	3683	CA	VAL B 533	39.753	32.676	139.116	1.00	84.42	C
ATOM	3684	C	VAL B 533	40.242	33.838	139.982	1.00	84.06	C
ATOM	3685	O	VAL B 533	41.369	34.303	140.067	1.00	84.64	O
ATOM	3686	CB	VAL B 533	39.383	33.246	137.730	1.00	83.89	C
ATOM	3687	CG1	VAL B 533	40.659	33.683	137.031	1.00	84.42	C
ATOM	3688	CG2	VAL B 533	38.598	32.275	136.875	1.00	83.22	C
ATOM	3689	N	VAL B 534	39.311	34.417	140.708	1.00	83.35	N

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ATOM 3690 CA VAL B 534	39.456 35.528 141.603 1.00 82.59	C
ATOM 3691 C VAL B 534	39.734 35.000 143.010 1.00 81.92	C
ATOM 3692 O VAL B 534	38.992 34.165 143.545 1.00 81.04	O
ATOM 3693 CB VAL B 534	38.130 36.341 141.681 1.00 83.62	C
ATOM 3694 CG1 VAL B 534	38.063 37.407 142.770 1.00 82.90	C
ATOM 3695 CG2 VAL B 534	37.780 36.953 140.330 1.00 83.42	C
ATOM 3696 N PRO B 535	40.773 35.559 143.595 1.00 81.11	N
ATOM 3697 CA PRO B 535	41.165 35.291 144.949 1.00 81.47	C
ATOM 3698 C PRO B 535	40.073 35.790 145.902 1.00 82.82	C
ATOM 3699 O PRO B 535	39.136 36.568 145.679 1.00 82.16	O
ATOM 3700 CB PRO B 535	42.487 36.020 145.216 1.00 80.86	C
ATOM 3701 CG PRO B 535	42.801 36.691 143.924 1.00 80.41	C
ATOM 3702 CD PRO B 535	41.621 36.577 142.993 1.00 81.03	C
ATOM 3703 N LEU B 536	40.224 35.284 147.130 1.00 84.67	N
ATOM 3704 CA LEU B 536	39.352 35.560 148.252 1.00 84.99	C
ATOM 3705 C LEU B 536	39.657 36.837 149.021 1.00 84.28	C
ATOM 3706 O LEU B 536	39.810 36.761 150.252 1.00 85.66	O
ATOM 3711 N TYR B 537	39.741 37.978 148.331 1.00 81.66	N
ATOM 3712 CA TYR B 537	39.965 39.218 149.085 1.00 78.56	C
ATOM 3713 C TYR B 537	38.602 39.523 149.714 1.00 76.70	C
ATOM 3714 O TYR B 537	37.559 39.570 149.058 1.00 75.81	O
ATOM 3715 CB TYR B 537	40.437 40.321 148.182 1.00 78.91	C
ATOM 3716 CG TYR B 537	41.726 40.001 147.471 1.00 79.96	C
ATOM 3717 CD1 TYR B 537	42.887 39.774 148.192 1.00 80.90	C
ATOM 3718 CD2 TYR B 537	41.817 39.952 146.089 1.00 80.61	C
ATOM 3719 CE1 TYR B 537	44.097 39.501 147.583 1.00 81.43	C
ATOM 3720 CE2 TYR B 537	43.028 39.678 145.476 1.00 81.08	C
ATOM 3721 CZ TYR B 537	44.164 39.450 146.206 1.00 81.43	C
ATOM 3722 OH TYR B 537	45.357 39.179 145.583 1.00 81.38	O
ATOM 3723 N ASP B 538	38.625 39.692 151.023 1.00 74.61	N
ATOM 3724 CA ASP B 538	37.446 39.975 151.810 1.00 71.95	C
ATOM 3725 C ASP B 538	36.696 41.262 151.583 1.00 67.52	C
ATOM 3726 O ASP B 538	35.466 41.224 151.471 1.00 67.67	O
ATOM 3727 CB ASP B 538	37.899 39.961 153.285 1.00 76.38	C
ATOM 3728 CG ASP B 538	37.833 38.503 153.725 1.00 80.55	C
ATOM 3729 OD1 ASP B 538	36.876 37.840 153.224 1.00 82.80	O
ATOM 3730 OD2 ASP B 538	38.710 38.078 154.514 1.00 82.20	O
ATOM 3731 N LEU B 539	37.368 42.406 151.536 1.00 61.88	N
ATOM 3732 CA LEU B 539	36.638 43.666 151.328 1.00 57.02	C
ATOM 3733 C LEU B 539	36.004 43.724 149.949 1.00 55.58	C
ATOM 3734 O LEU B 539	34.884 44.219 149.782 1.00 55.33	O
ATOM 3735 CB LEU B 539	37.565 44.827 151.632 1.00 54.62	C
ATOM 3736 CG LEU B 539	37.028 46.242 151.719 1.00 52.63	C
ATOM 3737 CD1 LEU B 539	35.746 46.356 152.513 1.00 52.27	C
ATOM 3738 CD2 LEU B 539	38.067 47.179 152.303 1.00 52.01	C

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ATOM 3739 N LEU B 540	36.688 43.219 148.933 1.00 53.90	N
ATOM 3740 CA LEU B 540	36.181 43.177 147.572 1.00 52.79	C
ATOM 3741 C LEU B 540	34.995 42.215 147.482 1.00 53.01	C
ATOM 3742 O LEU B 540	33.997 42.532 146.834 1.00 51.76	O
ATOM 3743 CB LEU B 540	37.305 42.784 146.604 1.00 52.02	C
ATOM 3744 CG LEU B 540	36.956 42.739 145.109 1.00 50.85	C
ATOM 3745 CD1 LEU B 540	36.882 44.150 144.556 1.00 50.14	C
ATOM 3746 CD2 LEU B 540	37.918 41.898 144.288 1.00 49.04	C
ATOM 3747 N LEU B 541	35.009 41.061 148.168 1.00 54.06	N
ATOM 3748 CA LEU B 541	33.851 40.167 148.078 1.00 55.51	C
ATOM 3749 C LEU B 541	32.655 40.800 148.757 1.00 54.97	C
ATOM 3750 O LEU B 541	31.489 40.624 148.359 1.00 55.00	O
ATOM 3751 CB LEU B 541	34.142 38.728 148.519 1.00 57.67	C
ATOM 3752 CG LEU B 541	35.260 38.143 147.614 1.00 61.07	C
ATOM 3753 CD1 LEU B 541	35.784 36.793 148.069 1.00 62.23	C
ATOM 3754 CD2 LEU B 541	34.853 38.060 146.141 1.00 61.20	C
ATOM 3755 N GLU B 542	32.959 41.581 149.781 1.00 54.14	N
ATOM 3756 CA GLU B 542	31.900 42.280 150.518 1.00 53.44	C
ATOM 3757 C GLU B 542	31.240 43.265 149.573 1.00 52.31	C
ATOM 3758 O GLU B 542	30.027 43.175 149.439 1.00 53.50	O
ATOM 3759 CB GLU B 542	32.503 42.961 151.720 1.00 54.11	C
ATOM 3760 CG GLU B 542	31.596 43.714 152.660 1.00 55.33	C
ATOM 3761 CD GLU B 542	32.440 44.275 153.805 1.00 56.53	C
ATOM 3762 OE1 GLU B 542	33.437 43.602 154.207 1.00 56.98	O
ATOM 3763 OE2 GLU B 542	32.128 45.369 154.319 1.00 56.39	O
ATOM 3764 N MET B 543	31.971 44.138 148.901 1.00 50.59	N
ATOM 3765 CA MET B 543	31.349 45.101 148.005 1.00 49.97	C
ATOM 3766 C MET B 543	30.635 44.411 146.876 1.00 50.80	C
ATOM 3767 O MET B 543	29.540 44.816 146.450 1.00 52.14	O
ATOM 3768 CB MET B 543	32.413 46.070 147.501 1.00 50.12	C
ATOM 3769 CG MET B 543	33.138 46.730 148.686 1.00 50.55	C
ATOM 3770 SD MET B 543	32.069 48.020 149.371 1.00 50.36	S
ATOM 3771 CE MET B 543	31.905 47.356 151.033 1.00 52.76	C
ATOM 3772 N LEU B 544	31.229 43.343 146.348 1.00 51.11	N
ATOM 3773 CA LEU B 544	30.559 42.599 145.275 1.00 51.10	C
ATOM 3774 C LEU B 544	29.248 42.015 145.783 1.00 52.28	C
ATOM 3775 O LEU B 544	28.286 42.170 145.059 1.00 50.33	O
ATOM 3776 CB LEU B 544	31.466 41.517 144.722 1.00 50.23	C
ATOM 3777 CG LEU B 544	30.929 40.494 143.735 1.00 49.60	C
ATOM 3778 CD1 LEU B 544	30.393 41.090 142.446 1.00 48.96	C
ATOM 3779 CD2 LEU B 544	32.032 39.505 143.390 1.00 49.82	C
ATOM 3780 N ASP B 545	29.195 41.388 146.960 1.00 56.16	N
ATOM 3781 CA ASP B 545	27.967 40.810 147.477 1.00 60.23	C
ATOM 3782 C ASP B 545	26.867 41.826 147.692 1.00 60.49	C
ATOM 3783 O ASP B 545	25.711 41.499 147.422 1.00 61.09	O

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ATOM	3784	CB	ASP B 545	28.103	40.031	148.779	1.00	64.79	C
ATOM	3785	CG	ASP B 545	28.988	38.800	148.640	1.00	70.11	C
ATOM	3786	OD1	ASP B 545	29.317	38.313	147.511	1.00	71.90	O
ATOM	3787	OD2	ASP B 545	29.389	38.269	149.725	1.00	72.22	O
ATOM	3788	N	ALA B 546	27.171	43.047	148.113	1.00	60.93	N
ATOM	3789	CA	ALA B 546	26.152	44.070	148.284	1.00	61.29	C
ATOM	3790	C	ALA B 546	25.272	44.131	147.046	1.00	63.00	C
ATOM	3791	O	ALA B 546	24.067	44.214	147.132	1.00	63.83	O
ATOM	3792	CB	ALA B 546	26.806	45.410	148.517	1.00	60.51	C
ATOM	3793	N	HIS B 547	25.816	44.105	145.856	1.00	65.90	N
ATOM	3794	CA	HIS B 547	25.149	44.156	144.603	1.00	68.65	C
ATOM	3795	C	HIS B 547	24.373	42.917	144.294	1.00	72.82	C
ATOM	3796	O	HIS B 547	23.265	43.046	143.798	1.00	75.14	O
ATOM	3797	CB	HIS B 547	26.221	44.270	143.483	1.00	67.88	C
ATOM	3798	CG	HIS B 547	26.600	45.724	143.595	1.00	67.12	C
ATOM	3799	ND1	HIS B 547	26.077	46.651	142.731	1.00	67.07	N
ATOM	3800	CD2	HIS B 547	27.373	46.366	144.494	1.00	66.64	C
ATOM	3801	CE1	HIS B 547	26.535	47.840	143.060	1.00	67.09	C
ATOM	3802	NE2	HIS B 547	27.306	47.685	144.124	1.00	67.48	N
ATOM	3803	N	ARG B 548	24.946	41.760	144.532	1.00	78.22	N
ATOM	3804	CA	ARG B 548	24.196	40.536	144.180	1.00	83.75	C
ATOM	3805	C	ARG B 548	22.972	40.425	145.078	1.00	85.03	C
ATOM	3806	O	ARG B 548	22.876	41.170	146.088	1.00	85.76	O
ATOM	3807	CB	ARG B 548	25.123	39.326	144.228	1.00	87.19	C
ATOM	3808	CG	ARG B 548	26.584	39.516	143.857	1.00	90.24	C
ATOM	3809	CD	ARG B 548	26.909	40.087	142.494	1.00	92.85	C
ATOM	3810	NE	ARG B 548	25.930	39.932	141.430	1.00	95.55	N
ATOM	3811	CZ	ARG B 548	25.828	40.633	140.304	1.00	96.65	C
ATOM	3812	NH1	ARG B 548	26.679	41.608	140.013	1.00	97.08	N
ATOM	3813	NH2	ARG B 548	24.853	40.355	139.434	1.00	97.27	N
TER	3814		ARG B 548						
HETATM	3815	C1	EST B 600	40.756	47.434	139.452	1.00	35.74	C
HETATM	3816	C2	EST B 600	41.286	48.562	140.064	1.00	38.16	C
HETATM	3817	C3	EST B 600	40.891	49.805	139.618	1.00	39.43	C
HETATM	3818	O3	EST B 600	41.415	50.943	140.213	1.00	40.63	O
HETATM	3819	C4	EST B 600	39.981	49.997	138.565	1.00	38.76	C
HETATM	3820	C5	EST B 600	39.449	48.830	137.961	1.00	37.67	C
HETATM	3821	C6	EST B 600	38.565	49.058	136.735	1.00	36.92	C
HETATM	3822	C7	EST B 600	38.137	47.775	136.034	1.00	35.61	C
HETATM	3823	C8	EST B 600	37.933	46.649	137.055	1.00	35.04	C
HETATM	3824	C9	EST B 600	39.261	46.343	137.787	1.00	34.78	C
HETATM	3825	C10	EST B 600	39.838	47.566	138.419	1.00	35.26	C
HETATM	3826	C11	EST B 600	39.049	45.234	138.797	1.00	34.27	C
HETATM	3827	C12	EST B 600	38.667	43.936	138.058	1.00	33.86	C
HETATM	3828	C13	EST B 600	37.350	44.218	137.357	1.00	34.33	C

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HETATM 3829 C14 EST B 600	37.537 45.388 136.370 1.00 34.22	C
HETATM 3830 C15 EST B 600	36.199 45.341 135.639 1.00 34.44	C
HETATM 3831 C16 EST B 600	36.130 43.825 135.232 1.00 35.27	C
HETATM 3832 C17 EST B 600	36.914 43.139 136.369 1.00 35.52	C
HETATM 3833 O17 EST B 600	36.251 41.975 136.810 1.00 36.44	O
HETATM 3834 C18 EST B 600	36.270 44.480 138.386 1.00 33.93	C
ATOM 3835 N SER C 305	4.168 35.830 109.907 1.00 90.23	N
ATOM 3836 CA SER C 305	4.469 36.963 108.991 1.00 89.00	C
ATOM 3837 C SER C 305	3.303 37.261 108.070 1.00 88.50	C
ATOM 3838 O SER C 305	2.833 36.386 107.350 1.00 88.52	O
ATOM 3839 CB SER C 305	5.742 36.644 108.192 1.00 88.54	C
ATOM 3840 OG SER C 305	6.028 37.662 107.253 1.00 87.89	O
ATOM 3841 N LEU C 306	2.873 38.521 108.031 1.00 88.30	N
ATOM 3842 CA LEU C 306	1.813 38.932 107.102 1.00 87.75	C
ATOM 3843 C LEU C 306	2.227 38.379 105.733 1.00 86.44	C
ATOM 3844 O LEU C 306	1.494 37.623 105.105 1.00 86.96	O
ATOM 3845 CB LEU C 306	1.643 40.449 107.031 1.00 87.75	C
ATOM 3849 N ALA C 307	3.428 38.710 105.287 1.00 84.48	N
ATOM 3850 CA ALA C 307	3.975 38.243 104.036 1.00 83.02	C
ATOM 3851 C ALA C 307	3.456 36.855 103.710 1.00 81.72	C
ATOM 3852 O ALA C 307	2.787 36.700 102.691 1.00 81.74	O
ATOM 3853 CB ALA C 307	5.499 38.153 104.101 1.00 83.87	C
ATOM 3854 N LEU C 308	3.741 35.897 104.578 1.00 80.64	N
ATOM 3855 CA LEU C 308	3.313 34.528 104.349 1.00 80.56	C
ATOM 3856 C LEU C 308	1.837 34.227 104.393 1.00 80.32	C
ATOM 3857 O LEU C 308	1.451 33.090 104.129 1.00 81.28	O
ATOM 3858 CB LEU C 308	4.088 33.638 105.326 1.00 80.74	C
ATOM 3859 CG LEU C 308	5.606 33.702 105.214 1.00 81.07	C
ATOM 3860 CD1 LEU C 308	6.233 32.474 105.868 1.00 81.84	C
ATOM 3861 CD2 LEU C 308	6.072 33.806 103.771 1.00 81.43	C
ATOM 3862 N SER C 309	0.941 35.134 104.672 1.00 79.89	N
ATOM 3863 CA SER C 309	-0.479 34.948 104.731 1.00 79.30	C
ATOM 3864 C SER C 309	-1.221 35.614 103.592 1.00 78.26	C
ATOM 3865 O SER C 309	-2.261 35.090 103.204 1.00 79.47	O
ATOM 3866 CB SER C 309	-1.002 35.662 105.998 1.00 80.60	C
ATOM 3867 OG SER C 309	-0.215 35.163 107.066 1.00 83.66	O
ATOM 3868 N LEU C 310	-0.756 36.759 103.112 1.00 76.19	N
ATOM 3869 CA LEU C 310	-1.508 37.420 102.054 1.00 73.82	C
ATOM 3870 C LEU C 310	-1.655 36.484 100.863 1.00 73.16	C
ATOM 3871 O LEU C 310	-0.922 35.521 100.655 1.00 73.48	O
ATOM 3872 CB LEU C 310	-0.896 38.740 101.649 1.00 73.31	C
ATOM 3873 CG LEU C 310	-0.133 39.482 102.740 1.00 72.27	C
ATOM 3874 CD1 LEU C 310	1.312 39.565 102.299 1.00 72.68	C
ATOM 3875 CD2 LEU C 310	-0.738 40.847 102.927 1.00 72.89	C
ATOM 3876 N THR C 311	-2.687 36.805 100.099 1.00 71.77	N

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ATOM	3877	CA	THR C 311	-2.995	36.006	98.906	1.00	70.70	C
ATOM	3878	C	THR C 311	-2.290	36.693	97.760	1.00	69.86	C
ATOM	3879	O	THR C 311	-2.027	37.901	97.909	1.00	69.35	O
ATOM	3880	CB	THR C 311	-4.525	35.958	98.804	1.00	70.54	C
ATOM	3881	OG1	THR C 311	-5.119	37.248	98.625	1.00	70.13	O
ATOM	3882	CG2	THR C 311	-5.108	35.381	100.078	1.00	69.62	C
ATOM	3883	N	ALA C 312	-2.027	36.051	96.633	1.00	69.24	N
ATOM	3884	CA	ALA C 312	-1.352	36.731	95.535	1.00	69.20	C
ATOM	3885	C	ALA C 312	-1.994	38.096	95.309	1.00	70.12	C
ATOM	3886	O	ALA C 312	-1.276	39.088	95.102	1.00	69.29	O
ATOM	3887	CB	ALA C 312	-1.319	35.905	94.278	1.00	68.74	C
ATOM	3888	N	ASP C 313	-3.336	38.147	95.357	1.00	71.47	N
ATOM	3889	CA	ASP C 313	-3.987	39.441	95.163	1.00	72.61	C
ATOM	3890	C	ASP C 313	-3.647	40.479	96.208	1.00	70.88	C
ATOM	3891	O	ASP C 313	-3.370	41.605	95.797	1.00	70.30	O
ATOM	3892	CB	ASP C 313	-5.493	39.237	95.037	1.00	76.00	C
ATOM	3893	CG	ASP C 313	-5.719	38.770	93.609	1.00	79.09	C
ATOM	3894	OD1	ASP C 313	-5.291	39.457	92.663	1.00	80.25	O
ATOM	3895	OD2	ASP C 313	-6.310	37.698	93.443	1.00	81.73	O
ATOM	3896	N	GLN C 314	-3.619	40.161	97.488	1.00	69.54	N
ATOM	3897	CA	GLN C 314	-3.275	41.129	98.517	1.00	69.05	C
ATOM	3898	C	GLN C 314	-1.827	41.588	98.406	1.00	67.22	C
ATOM	3899	O	GLN C 314	-1.555	42.776	98.566	1.00	67.37	O
ATOM	3900	CB	GLN C 314	-3.461	40.533	99.904	1.00	71.68	C
ATOM	3901	CG	GLN C 314	-4.663	39.606	99.946	1.00	73.75	C
ATOM	3902	CD	GLN C 314	-4.941	39.149	101.358	1.00	75.13	C
ATOM	3903	OE1	GLN C 314	-4.588	38.039	101.724	1.00	76.64	O
ATOM	3904	NE2	GLN C 314	-5.561	40.049	102.105	1.00	75.55	N
ATOM	3905	N	MET C 315	-0.942	40.636	98.123	1.00	64.44	N
ATOM	3906	CA	MET C 315	0.470	40.910	97.899	1.00	60.68	C
ATOM	3907	C	MET C 315	0.626	41.972	96.811	1.00	57.71	C
ATOM	3908	O	MET C 315	1.238	43.010	96.977	1.00	55.57	O
ATOM	3909	CB	MET C 315	1.140	39.614	97.448	1.00	61.06	C
ATOM	3910	CG	MET C 315	2.650	39.635	97.262	1.00	61.75	C
ATOM	3911	SD	MET C 315	3.583	39.449	98.818	1.00	60.96	S
ATOM	3912	CE	MET C 315	4.383	41.044	98.814	1.00	61.10	C
ATOM	3913	N	VAL C 316	0.044	41.766	95.642	1.00	56.70	N
ATOM	3914	CA	VAL C 316	0.158	42.714	94.558	1.00	57.51	C
ATOM	3915	C	VAL C 316	-0.261	44.121	94.967	1.00	59.23	C
ATOM	3916	O	VAL C 316	0.397	45.117	94.654	1.00	59.22	O
ATOM	3917	CB	VAL C 316	-0.679	42.341	93.326	1.00	56.92	C
ATOM	3918	CG1	VAL C 316	-0.569	43.429	92.272	1.00	56.72	C
ATOM	3919	CG2	VAL C 316	-0.201	41.056	92.696	1.00	57.50	C
ATOM	3920	N	SER C 317	-1.408	44.225	95.634	1.00	60.46	N
ATOM	3921	CA	SER C 317	-1.945	45.518	96.051	1.00	60.81	C

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ATOM 3922 C SER C 317	-1.093 46.130 97.130 1.00 59.69	C
ATOM 3923 O SER C 317	-0.790 47.318 97.078 1.00 61.24	O
ATOM 3924 CB SER C 317	-3.356 45.335 96.598 1.00 62.81	C
ATOM 3925 OG SER C 317	-3.478 43.929 96.789 1.00 65.54	O
ATOM 3926 N ALA C 318	-0.674 45.312 98.083 1.00 57.86	N
ATOM 3927 CA ALA C 318	0.230 45.828 99.116 1.00 55.91	C
ATOM 3928 C ALA C 318	1.410 46.511 98.421 1.00 54.61	C
ATOM 3929 O ALA C 318	1.758 47.631 98.764 1.00 54.19	O
ATOM 3930 CB ALA C 318	0.694 44.680 99.992 1.00 55.91	C
ATOM 3931 N LEU C 319	1.999 45.827 97.442 1.00 53.65	N
ATOM 3932 CA LEU C 319	3.139 46.302 96.688 1.00 52.25	C
ATOM 3933 C LEU C 319	2.788 47.488 95.835 1.00 53.02	C
ATOM 3934 O LEU C 319	3.484 48.487 95.827 1.00 52.37	O
ATOM 3935 CB LEU C 319	3.708 45.196 95.818 1.00 50.23	C
ATOM 3936 CG LEU C 319	4.420 44.061 96.538 1.00 48.08	C
ATOM 3937 CD1 LEU C 319	4.830 43.016 95.526 1.00 47.94	C
ATOM 3938 CD2 LEU C 319	5.599 44.608 97.305 1.00 47.85	C
ATOM 3939 N LEU C 320	1.641 47.400 95.176 1.00 55.81	N
ATOM 3940 CA LEU C 320	1.154 48.519 94.358 1.00 57.42	C
ATOM 3941 C LEU C 320	0.962 49.743 95.221 1.00 60.12	C
ATOM 3942 O LEU C 320	1.164 50.845 94.749 1.00 61.29	O
ATOM 3943 CB LEU C 320	-0.156 48.155 93.672 1.00 55.83	C
ATOM 3944 CG LEU C 320	0.145 47.550 92.300 1.00 56.10	C
ATOM 3945 CD1 LEU C 320	-1.103 47.033 91.638 1.00 56.53	C
ATOM 3946 CD2 LEU C 320	0.879 48.586 91.455 1.00 55.68	C
ATOM 3947 N ASP C 321	0.602 49.555 96.481 1.00 63.42	N
ATOM 3948 CA ASP C 321	0.416 50.610 97.421 1.00 66.85	C
ATOM 3949 C ASP C 321	1.670 51.255 97.949 1.00 66.21	C
ATOM 3950 O ASP C 321	1.695 52.467 98.155 1.00 68.14	O
ATOM 3951 CB ASP C 321	-0.291 50.044 98.657 1.00 72.29	C
ATOM 3952 CG ASP C 321	-1.722 50.571 98.608 1.00 77.96	C
ATOM 3953 OD1 ASP C 321	-2.070 51.246 97.600 1.00 80.39	O
ATOM 3954 OD2 ASP C 321	-2.469 50.284 99.584 1.00 80.85	O
ATOM 3955 N ALA C 322	2.714 50.472 98.173 1.00 63.61	N
ATOM 3956 CA ALA C 322	3.950 51.006 98.728 1.00 60.20	C
ATOM 3957 C ALA C 322	4.680 51.890 97.747 1.00 58.78	C
ATOM 3958 O ALA C 322	5.599 52.626 98.139 1.00 59.24	O
ATOM 3959 CB ALA C 322	4.778 49.803 99.151 1.00 60.05	C
ATOM 3960 N GLU C 323	4.327 51.852 96.476 1.00 56.65	N
ATOM 3961 CA GLU C 323	5.031 52.668 95.494 1.00 55.83	C
ATOM 3962 C GLU C 323	5.232 54.075 95.975 1.00 55.43	C
ATOM 3963 O GLU C 323	4.343 54.694 96.544 1.00 57.74	O
ATOM 3964 CB GLU C 323	4.254 52.576 94.194 1.00 56.01	C
ATOM 3965 CG GLU C 323	4.600 51.272 93.470 1.00 56.63	C
ATOM 3966 CD GLU C 323	5.983 51.419 92.874 1.00 57.40	C

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ATOM	3967	OE1 GLU C 323	6.212	52.304	92.023	1.00	57.98	O
ATOM	3968	OE2 GLU C 323	6.880	50.666	93.263	1.00	58.03	O
ATOM	3969	N PRO C 324	6.409	54.616	95.777	1.00	54.70	N
ATOM	3970	CA PRO C 324	6.786	55.962	96.179	1.00	54.85	C
ATOM	3971	C PRO C 324	6.310	56.978	95.162	1.00	54.96	C
ATOM	3972	O PRO C 324	5.916	56.612	94.060	1.00	55.47	O
ATOM	3973	CB PRO C 324	8.323	56.009	96.180	1.00	54.75	C
ATOM	3974	CG PRO C 324	8.594	54.950	95.149	1.00	54.91	C
ATOM	3975	CD PRO C 324	7.497	53.924	95.095	1.00	54.34	C
ATOM	3976	N PRO C 325	6.350	58.235	95.520	1.00	55.28	N
ATOM	3977	CA PRO C 325	5.944	59.330	94.660	1.00	56.56	C
ATOM	3978	C PRO C 325	6.942	59.497	93.541	1.00	58.24	C
ATOM	3979	O PRO C 325	8.060	59.038	93.770	1.00	60.47	O
ATOM	3980	CB PRO C 325	6.042	60.592	95.544	1.00	56.36	C
ATOM	3981	CG PRO C 325	7.047	60.187	96.584	1.00	55.61	C
ATOM	3982	CD PRO C 325	6.844	58.699	96.817	1.00	55.82	C
ATOM	3983	N ILE C 326	6.696	60.112	92.417	1.00	59.91	N
ATOM	3984	CA ILE C 326	7.702	60.318	91.376	1.00	61.72	C
ATOM	3985	C ILE C 326	8.345	61.680	91.636	1.00	60.31	C
ATOM	3986	O ILE C 326	7.564	62.630	91.724	1.00	62.10	O
ATOM	3987	CB ILE C 326	7.233	60.412	89.914	1.00	64.58	C
ATOM	3988	CG1 ILE C 326	6.088	61.412	89.703	1.00	67.48	C
ATOM	3989	CG2 ILE C 326	6.835	59.043	89.331	1.00	64.51	C
ATOM	3990	CD1 ILE C 326	4.859	61.384	90.611	1.00	68.49	C
ATOM	3991	N LEU C 327	9.634	61.807	91.794	1.00	58.82	N
ATOM	3992	CA LEU C 327	10.180	63.136	92.062	1.00	58.72	C
ATOM	3993	C LEU C 327	10.321	63.939	90.783	1.00	60.42	C
ATOM	3994	O LEU C 327	10.095	63.418	89.689	1.00	60.91	O
ATOM	3995	CB LEU C 327	11.502	62.961	92.786	1.00	56.84	C
ATOM	3996	CG LEU C 327	11.470	62.092	94.033	1.00	55.74	C
ATOM	3997	CD1 LEU C 327	12.689	62.456	94.882	1.00	55.78	C
ATOM	3998	CD2 LEU C 327	10.193	62.178	94.839	1.00	54.39	C
ATOM	3999	N TYR C 328	10.644	65.222	90.887	1.00	62.10	N
ATOM	4000	CA TYR C 328	10.847	66.052	89.715	1.00	62.96	C
ATOM	4001	C TYR C 328	12.283	66.554	89.916	1.00	64.05	C
ATOM	4002	O TYR C 328	12.651	66.744	91.074	1.00	62.32	O
ATOM	4003	CB TYR C 328	9.994	67.289	89.586	1.00	63.76	C
ATOM	4004	CG TYR C 328	8.623	66.926	89.084	1.00	65.24	C
ATOM	4005	CD1 TYR C 328	7.639	66.481	89.957	1.00	66.17	C
ATOM	4006	CD2 TYR C 328	8.324	67.063	87.744	1.00	65.99	C
ATOM	4007	CE1 TYR C 328	6.373	66.164	89.497	1.00	67.20	C
ATOM	4008	CE2 TYR C 328	7.057	66.739	87.286	1.00	67.29	C
ATOM	4009	CZ TYR C 328	6.099	66.292	88.161	1.00	67.84	C
ATOM	4010	OH TYR C 328	4.841	65.967	87.690	1.00	70.53	O
ATOM	4011	N SER C 329	12.954	66.716	88.786	1.00	66.16	N

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ATOM 4012 CA SER C 329	14.325 67.186 88.873 1.00 68.05	C
ATOM 4013 C SER C 329	14.324 68.663 89.244 1.00 70.45	C
ATOM 4014 O SER C 329	13.443 69.380 88.808 1.00 69.41	O
ATOM 4015 CB SER C 329	15.044 67.000 87.545 1.00 66.88	C
ATOM 4016 OG SER C 329	16.260 67.726 87.721 1.00 67.32	O
ATOM 4017 N GLU C 330	15.292 69.079 90.029 1.00 75.28	N
ATOM 4018 CA GLU C 330	15.486 70.451 90.466 1.00 79.72	C
ATOM 4019 C GLU C 330	15.752 71.335 89.247 1.00 80.73	C
ATOM 4020 O GLU C 330	16.490 71.033 88.312 1.00 81.64	O
ATOM 4021 CB GLU C 330	16.659 70.570 91.435 1.00 83.87	C
ATOM 4022 CG GLU C 330	17.883 71.352 90.984 1.00 88.78	C
ATOM 4023 CD GLU C 330	19.152 70.582 90.643 1.00 91.78	C
ATOM 4024 OE1 GLU C 330	19.923 70.181 91.569 1.00 93.23	O
ATOM 4025 OE2 GLU C 330	19.404 70.377 89.422 1.00 92.87	O
ATOM 4026 N PHE C 337	24.571 71.818 80.367 1.00 86.34	N
ATOM 4027 CA PHE C 337	24.988 70.495 80.814 1.00 85.91	C
ATOM 4028 C PHE C 337	26.498 70.301 80.720 1.00 84.19	C
ATOM 4029 O PHE C 337	27.064 70.525 79.646 1.00 85.85	O
ATOM 4030 CB PHE C 337	24.383 69.350 79.978 1.00 87.18	C
ATOM 4031 CG PHE C 337	23.005 68.970 80.445 1.00 88.47	C
ATOM 4032 CD1 PHE C 337	22.650 69.084 81.778 1.00 88.68	C
ATOM 4033 CD2 PHE C 337	22.068 68.507 79.534 1.00 89.03	C
ATOM 4034 CE1 PHE C 337	21.379 68.746 82.187 1.00 89.31	C
ATOM 4035 CE2 PHE C 337	20.795 68.160 79.942 1.00 89.22	C
ATOM 4036 CZ PHE C 337	20.454 68.283 81.275 1.00 89.44	C
ATOM 4037 N SER C 338	27.095 69.868 81.803 1.00 80.55	N
ATOM 4038 CA SER C 338	28.533 69.626 81.747 1.00 77.95	C
ATOM 4039 C SER C 338	28.746 68.395 82.598 1.00 76.21	C
ATOM 4040 O SER C 338	27.886 68.188 83.475 1.00 75.98	O
ATOM 4041 CB SER C 338	29.228 70.829 82.347 1.00 78.52	C
ATOM 4042 OG SER C 338	28.558 71.186 83.554 1.00 78.56	O
ATOM 4043 N GLU C 339	29.821 67.656 82.395 1.00 73.78	N
ATOM 4044 CA GLU C 339	30.025 66.490 83.270 1.00 72.51	C
ATOM 4045 C GLU C 339	29.556 66.874 84.677 1.00 71.03	C
ATOM 4046 O GLU C 339	28.611 66.294 85.215 1.00 71.03	O
ATOM 4047 CB GLU C 339	31.473 66.090 83.172 1.00 72.67	C
ATOM 4048 CG GLU C 339	32.133 65.356 84.319 1.00 73.25	C
ATOM 4049 CD GLU C 339	33.182 64.454 83.684 1.00 74.49	C
ATOM 4050 OE1 GLU C 339	32.762 63.725 82.754 1.00 74.89	O
ATOM 4051 OE2 GLU C 339	34.357 64.515 84.104 1.00 75.34	O
ATOM 4052 N ALA C 340	30.147 67.886 85.304 1.00 68.89	N
ATOM 4053 CA ALA C 340	29.747 68.302 86.619 1.00 67.05	C
ATOM 4054 C ALA C 340	28.288 68.694 86.720 1.00 66.84	C
ATOM 4055 O ALA C 340	27.647 68.263 87.697 1.00 68.55	O
ATOM 4056 CB ALA C 340	30.586 69.468 87.090 1.00 67.09	C

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ATOM	4057	N	SER C 341	27.738	69.480	85.816	1.00	65.56	N
ATOM	4058	CA	SER C 341	26.339	69.884	85.973	1.00	65.07	C
ATOM	4059	C	SER C 341	25.432	68.684	85.823	1.00	64.33	C
ATOM	4060	O	SER C 341	24.495	68.609	86.620	1.00	65.21	O
ATOM	4061	CB	SER C 341	25.945	71.008	85.030	1.00	66.88	C
ATOM	4062	OG	SER C 341	24.992	70.587	84.051	1.00	69.34	O
ATOM	4063	N	MET C 342	25.686	67.800	84.854	1.00	63.02	N
ATOM	4064	CA	MET C 342	24.828	66.622	84.715	1.00	61.44	C
ATOM	4065	C	MET C 342	24.942	65.670	85.912	1.00	60.22	C
ATOM	4066	O	MET C 342	23.927	65.306	86.519	1.00	60.19	O
ATOM	4067	CB	MET C 342	25.122	65.795	83.465	1.00	60.94	C
ATOM	4068	CG	MET C 342	23.941	64.848	83.257	1.00	62.09	C
ATOM	4069	SD	MET C 342	23.804	64.321	81.531	1.00	64.81	S
ATOM	4070	CE	MET C 342	25.274	63.284	81.451	1.00	63.38	C
ATOM	4071	N	MET C 343	26.163	65.286	86.308	1.00	58.00	N
ATOM	4072	CA	MET C 343	26.341	64.413	87.450	1.00	56.72	C
ATOM	4073	C	MET C 343	25.553	64.987	88.620	1.00	56.76	C
ATOM	4074	O	MET C 343	24.872	64.248	89.333	1.00	57.58	O
ATOM	4075	CB	MET C 343	27.795	64.251	87.840	1.00	56.43	C
ATOM	4076	CG	MET C 343	28.464	63.270	86.879	1.00	56.60	C
ATOM	4077	SD	MET C 343	27.589	61.705	86.841	1.00	56.12	S
ATOM	4078	CE	MET C 343	27.584	61.327	88.613	1.00	54.77	C
ATOM	4079	N	GLY C 344	25.647	66.303	88.785	1.00	55.31	N
ATOM	4080	CA	GLY C 344	24.910	66.952	89.857	1.00	53.95	C
ATOM	4081	C	GLY C 344	23.438	66.608	89.810	1.00	52.78	C
ATOM	4082	O	GLY C 344	22.965	66.058	90.792	1.00	52.87	O
ATOM	4083	N	LEU C 345	22.688	66.891	88.757	1.00	53.41	N
ATOM	4084	CA	LEU C 345	21.261	66.576	88.744	1.00	53.62	C
ATOM	4085	C	LEU C 345	20.954	65.114	89.072	1.00	52.75	C
ATOM	4086	O	LEU C 345	20.186	64.786	89.969	1.00	52.21	O
ATOM	4087	CB	LEU C 345	20.629	66.734	87.371	1.00	55.34	C
ATOM	4088	CG	LEU C 345	20.582	68.144	86.805	1.00	57.66	C
ATOM	4089	CD1	LEU C 345	21.389	68.194	85.513	1.00	58.63	C
ATOM	4090	CD2	LEU C 345	19.115	68.470	86.558	1.00	58.64	C
ATOM	4091	N	LEU C 346	21.591	64.264	88.253	1.00	50.95	N
ATOM	4092	CA	LEU C 346	21.427	62.821	88.384	1.00	48.84	C
ATOM	4093	C	LEU C 346	21.621	62.380	89.818	1.00	47.52	C
ATOM	4094	O	LEU C 346	20.815	61.740	90.475	1.00	46.33	O
ATOM	4095	CB	LEU C 346	22.398	62.188	87.379	1.00	47.89	C
ATOM	4096	CG	LEU C 346	21.889	62.307	85.939	1.00	47.83	C
ATOM	4097	CD1	LEU C 346	22.744	61.386	85.065	1.00	48.71	C
ATOM	4098	CD2	LEU C 346	20.410	62.004	85.768	1.00	45.87	C
ATOM	4099	N	THR C 347	22.767	62.777	90.342	1.00	47.15	N
ATOM	4100	CA	THR C 347	23.163	62.473	91.718	1.00	46.65	C
ATOM	4101	C	THR C 347	22.219	63.057	92.723	1.00	46.75	C

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ATOM 4102 O THR C 347	21.850 62.428 93.704 1.00 47.00	O
ATOM 4103 CB THR C 347	24.621 62.957 91.764 1.00 46.71	C
ATOM 4104 OG1 THR C 347	25.412 61.774 91.987 1.00 47.34	O
ATOM 4105 CG2 THR C 347	24.855 64.108 92.685 1.00 45.43	C
ATOM 4106 N ASN C 348	21.741 64.272 92.536 1.00 48.38	N
ATOM 4107 CA ASN C 348	20.800 64.933 93.432 1.00 48.80	C
ATOM 4108 C ASN C 348	19.478 64.160 93.443 1.00 47.26	C
ATOM 4109 O ASN C 348	18.850 63.828 94.448 1.00 46.97	O
ATOM 4110 CB ASN C 348	20.589 66.367 92.932 1.00 51.67	C
ATOM 4111 CG ASN C 348	19.510 67.096 93.727 1.00 55.80	C
ATOM 4112 OD1 ASN C 348	18.292 67.162 93.409 1.00 56.91	O
ATOM 4113 ND2 ASN C 348	20.009 67.668 94.842 1.00 56.64	N
ATOM 4114 N LEU C 349	18.996 63.846 92.246 1.00 45.48	N
ATOM 4115 CA LEU C 349	17.730 63.135 92.094 1.00 43.91	C
ATOM 4116 C LEU C 349	17.843 61.824 92.848 1.00 42.97	C
ATOM 4117 O LEU C 349	16.938 61.492 93.603 1.00 42.67	O
ATOM 4118 CB LEU C 349	17.402 63.025 90.592 1.00 44.22	C
ATOM 4119 CG LEU C 349	16.113 62.256 90.280 1.00 45.28	C
ATOM 4120 CD1 LEU C 349	14.890 63.005 90.815 1.00 44.98	C
ATOM 4121 CD2 LEU C 349	15.924 61.981 88.802 1.00 45.98	C
ATOM 4122 N ALA C 350	18.925 61.069 92.685 1.00 42.54	N
ATOM 4123 CA ALA C 350	19.170 59.789 93.329 1.00 41.93	C
ATOM 4124 C ALA C 350	19.145 59.965 94.846 1.00 42.66	C
ATOM 4125 O ALA C 350	18.382 59.288 95.534 1.00 42.32	O
ATOM 4126 CB ALA C 350	20.519 59.214 92.915 1.00 41.05	C
ATOM 4127 N ASP C 351	19.924 60.909 95.377 1.00 42.85	N
ATOM 4128 CA ASP C 351	19.891 61.156 96.801 1.00 44.92	C
ATOM 4129 C ASP C 351	18.473 61.409 97.333 1.00 46.20	C
ATOM 4130 O ASP C 351	18.134 61.037 98.479 1.00 46.87	O
ATOM 4131 CB ASP C 351	20.806 62.330 97.121 1.00 47.28	C
ATOM 4132 CG ASP C 351	20.808 62.552 98.629 1.00 49.76	C
ATOM 4133 OD1 ASP C 351	21.507 61.847 99.383 1.00 49.99	O
ATOM 4134 OD2 ASP C 351	20.076 63.475 99.055 1.00 51.97	O
ATOM 4135 N ARG C 352	17.580 62.055 96.578 1.00 45.35	N
ATOM 4136 CA ARG C 352	16.230 62.286 97.039 1.00 44.90	C
ATOM 4137 C ARG C 352	15.377 61.039 96.994 1.00 45.67	C
ATOM 4138 O ARG C 352	14.604 60.740 97.920 1.00 46.34	O
ATOM 4139 CB ARG C 352	15.622 63.384 96.190 1.00 45.66	C
ATOM 4140 CG ARG C 352	16.211 64.727 96.599 1.00 47.97	C
ATOM 4141 CD ARG C 352	15.095 65.784 96.368 1.00 49.73	C
ATOM 4142 NE ARG C 352	15.270 66.120 94.954 1.00 51.59	N
ATOM 4143 CZ ARG C 352	14.259 66.180 94.076 1.00 52.43	C
ATOM 4144 NH1 ARG C 352	13.012 65.962 94.496 1.00 50.90	N
ATOM 4145 NH2 ARG C 352	14.668 66.482 92.828 1.00 52.24	N
ATOM 4146 N GLU C 353	15.480 60.234 95.928 1.00 45.42	N

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ATOM 4147	CA	GLU C 353	14.681 59.005 95.829 1.00 44.09	C
ATOM 4148	C	GLU C 353	15.048 57.996 96.931 1.00 43.54	C
ATOM 4149	O	GLU C 353	14.249 57.145 97.354 1.00 41.61	O
ATOM 4150	CB	GLU C 353	14.925 58.352 94.479 1.00 43.55	C
ATOM 4151	CG	GLU C 353	14.829 59.283 93.288 1.00 44.01	C
ATOM 4152	CD	GLU C 353	14.774 58.522 91.971 1.00 44.71	C
ATOM 4153	OE1	GLU C 353	13.863 57.703 91.769 1.00 44.74	O
ATOM 4154	OE2	GLU C 353	15.652 58.718 91.111 1.00 45.16	O
ATOM 4155	N	LEU C 354	16.297 58.121 97.413 1.00 42.25	N
ATOM 4156	CA	LEU C 354	16.817 57.236 98.424 1.00 42.36	C
ATOM 4157	C	LEU C 354	15.967 57.327 99.669 1.00 43.23	C
ATOM 4158	O	LEU C 354	15.622 56.324 100.303 1.00 44.20	O
ATOM 4159	CB	LEU C 354	18.300 57.512 98.701 1.00 41.72	C
ATOM 4160	CG	LEU C 354	19.142 56.685 97.709 1.00 41.03	C
ATOM 4161	CD1	LEU C 354	20.499 57.306 97.552 1.00 41.57	C
ATOM 4162	CD2	LEU C 354	19.154 55.273 98.236 1.00 41.51	C
ATOM 4163	N	VAL C 355	15.617 58.560 99.994 1.00 43.50	N
ATOM 4164	CA	VAL C 355	14.766 58.766 101.172 1.00 43.54	C
ATOM 4165	C	VAL C 355	13.462 58.013 100.963 1.00 43.99	C
ATOM 4166	O	VAL C 355	13.044 57.168 101.749 1.00 44.67	O
ATOM 4167	CB	VAL C 355	14.536 60.278 101.340 1.00 42.48	C
ATOM 4168	CG1	VAL C 355	13.633 60.512 102.513 1.00 42.64	C
ATOM 4169	CG2	VAL C 355	15.872 60.974 101.564 1.00 42.45	C
ATOM 4170	N	HIS C 356	12.773 58.241 99.854 1.00 44.10	N
ATOM 4171	CA	HIS C 356	11.514 57.552 99.623 1.00 45.02	C
ATOM 4172	C	HIS C 356	11.760 56.068 99.613 1.00 44.50	C
ATOM 4173	O	HIS C 356	10.931 55.306 100.111 1.00 44.42	O
ATOM 4174	CB	HIS C 356	10.881 58.057 98.313 1.00 48.88	C
ATOM 4175	CG	HIS C 356	10.545 59.504 98.508 1.00 51.53	C
ATOM 4176	ND1	HIS C 356	9.269 59.940 98.714 1.00 52.82	N
ATOM 4177	CD2	HIS C 356	11.350 60.594 98.565 1.00 53.34	C
ATOM 4178	CE1	HIS C 356	9.287 61.255 98.886 1.00 53.87	C
ATOM 4179	NE2	HIS C 356	10.534 61.686 98.805 1.00 54.36	N
ATOM 4180	N	MET C 357	12.893 55.662 99.024 1.00 44.54	N
ATOM 4181	CA	MET C 357	13.210 54.233 98.928 1.00 43.62	C
ATOM 4182	C	MET C 357	13.141 53.532 100.274 1.00 42.21	C
ATOM 4183	O	MET C 357	12.466 52.525 100.393 1.00 42.85	O
ATOM 4184	CB	MET C 357	14.574 53.907 98.327 1.00 43.25	C
ATOM 4185	CG	MET C 357	14.636 52.406 97.985 1.00 42.60	C
ATOM 4186	SD	MET C 357	16.349 52.075 97.453 1.00 42.35	S
ATOM 4187	CE	MET C 357	16.261 52.824 95.831 1.00 43.46	C
ATOM 4188	N	ILE C 358	13.834 54.096 101.243 1.00 40.42	N
ATOM 4189	CA	ILE C 358	13.815 53.539 102.582 1.00 39.96	C
ATOM 4190	C	ILE C 358	12.394 53.337 103.074 1.00 41.38	C
ATOM 4191	O	ILE C 358	12.056 52.287 103.607 1.00 41.84	O

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ATOM 4192 CB ILE C 358	14.587 54.473 103.522 1.00 37.30	C
ATOM 4193 CG1 ILE C 358	16.020 54.488 103.073 1.00 37.04	C
ATOM 4194 CG2 ILE C 358	14.503 54.006 104.933 1.00 37.30	C
ATOM 4195 CD1 ILE C 358	16.901 55.392 103.869 1.00 38.43	C
ATOM 4196 N ASN C 359	11.533 54.324 102.909 1.00 43.86	N
ATOM 4197 CA ASN C 359	10.146 54.230 103.335 1.00 46.73	C
ATOM 4198 C ASN C 359	9.476 53.068 102.650 1.00 46.07	C
ATOM 4199 O ASN C 359	8.928 52.164 103.263 1.00 47.05	O
ATOM 4200 CB ASN C 359	9.407 55.532 103.002 1.00 52.10	C
ATOM 4201 CG ASN C 359	9.815 56.559 104.061 1.00 57.06	C
ATOM 4202 OD1 ASN C 359	9.530 56.230 105.237 1.00 61.37	O
ATOM 4203 ND2 ASN C 359	10.443 57.691 103.772 1.00 57.61	N
ATOM 4204 N TRP C 360	9.568 53.055 101.326 1.00 44.98	N
ATOM 4205 CA TRP C 360	8.980 51.992 100.530 1.00 43.27	C
ATOM 4206 C TRP C 360	9.436 50.637 101.030 1.00 43.73	C
ATOM 4207 O TRP C 360	8.653 49.706 101.171 1.00 44.79	O
ATOM 4208 CB TRP C 360	9.485 52.208 99.101 1.00 42.81	C
ATOM 4209 CG TRP C 360	9.293 50.969 98.261 1.00 43.02	C
ATOM 4210 CD1 TRP C 360	8.121 50.582 97.690 1.00 42.68	C
ATOM 4211 CD2 TRP C 360	10.270 49.978 97.909 1.00 42.05	C
ATOM 4212 NE1 TRP C 360	8.335 49.411 97.017 1.00 43.15	N
ATOM 4213 CE2 TRP C 360	9.632 49.020 97.128 1.00 42.10	C
ATOM 4214 CE3 TRP C 360	11.619 49.812 98.190 1.00 42.67	C
ATOM 4215 CZ2 TRP C 360	10.261 47.902 96.606 1.00 42.59	C
ATOM 4216 CZ3 TRP C 360	12.278 48.711 97.685 1.00 43.71	C
ATOM 4217 CH2 TRP C 360	11.598 47.767 96.899 1.00 43.79	C
ATOM 4218 N ALA C 361	10.732 50.463 101.287 1.00 43.63	N
ATOM 4219 CA ALA C 361	11.262 49.197 101.739 1.00 44.41	C
ATOM 4220 C ALA C 361	10.474 48.726 102.959 1.00 46.03	C
ATOM 4221 O ALA C 361	10.110 47.541 103.017 1.00 45.76	O
ATOM 4222 CB ALA C 361	12.745 49.292 102.036 1.00 43.71	C
ATOM 4223 N LYS C 362	10.182 49.624 103.894 1.00 47.55	N
ATOM 4224 CA LYS C 362	9.463 49.250 105.089 1.00 50.72	C
ATOM 4225 C LYS C 362	8.117 48.616 104.849 1.00 51.32	C
ATOM 4226 O LYS C 362	7.705 47.864 105.734 1.00 52.47	O
ATOM 4227 CB LYS C 362	9.354 50.432 106.038 1.00 53.23	C
ATOM 4228 CG LYS C 362	10.720 50.832 106.594 1.00 56.10	C
ATOM 4229 CD LYS C 362	11.155 49.773 107.599 1.00 60.05	C
ATOM 4230 CE LYS C 362	11.762 50.371 108.869 1.00 62.37	C
ATOM 4231 NZ LYS C 362	11.973 49.344 109.950 1.00 63.33	N
ATOM 4232 N ARG C 363	7.456 48.823 103.745 1.00 51.32	N
ATOM 4233 CA ARG C 363	6.186 48.226 103.427 1.00 52.74	C
ATOM 4234 C ARG C 363	6.288 47.007 102.539 1.00 51.87	C
ATOM 4235 O ARG C 363	5.238 46.502 102.129 1.00 53.22	O
ATOM 4236 CB ARG C 363	5.351 49.253 102.657 1.00 56.62	C

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ATOM	4237	CG	ARG C 363	6.006	50.631	102.784	1.00	62.69	C
ATOM	4238	CD	ARG C 363	5.368	51.299	104.018	1.00	68.16	C
ATOM	4239	NE	ARG C 363	3.954	51.463	103.640	1.00	73.89	N
ATOM	4240	CZ	ARG C 363	3.622	52.373	102.697	1.00	77.79	C
ATOM	4241	NH1	ARG C 363	4.613	53.120	102.163	1.00	78.54	N
ATOM	4242	NH2	ARG C 363	2.326	52.501	102.337	1.00	78.75	N
ATOM	4243	N	VAL C 364	7.443	46.512	102.137	1.00	50.42	N
ATOM	4244	CA	VAL C 364	7.407	45.312	101.264	1.00	48.81	C
ATOM	4245	C	VAL C 364	7.152	44.136	102.175	1.00	48.62	C
ATOM	4246	O	VAL C 364	7.960	43.818	103.056	1.00	49.16	O
ATOM	4247	CB	VAL C 364	8.758	45.196	100.552	1.00	47.54	C
ATOM	4248	CG1	VAL C 364	8.932	43.867	99.857	1.00	46.99	C
ATOM	4249	CG2	VAL C 364	8.826	46.340	99.567	1.00	47.58	C
ATOM	4250	N	PRO C 365	6.032	43.475	102.044	1.00	48.21	N
ATOM	4251	CA	PRO C 365	5.681	42.339	102.907	1.00	48.44	C
ATOM	4252	C	PRO C 365	6.876	41.471	103.242	1.00	48.67	C
ATOM	4253	O	PRO C 365	7.614	41.066	102.349	1.00	49.90	O
ATOM	4254	CB	PRO C 365	4.552	41.591	102.187	1.00	47.40	C
ATOM	4255	CG	PRO C 365	3.903	42.813	101.550	1.00	48.29	C
ATOM	4256	CD	PRO C 365	5.000	43.764	101.059	1.00	47.57	C
ATOM	4257	N	GLY C 366	7.125	41.223	104.524	1.00	48.37	N
ATOM	4258	CA	GLY C 366	8.198	40.394	105.005	1.00	47.61	C
ATOM	4259	C	GLY C 366	9.486	41.099	105.359	1.00	47.49	C
ATOM	4260	O	GLY C 366	10.295	40.559	106.123	1.00	48.03	O
ATOM	4261	N	PHE C 367	9.712	42.282	104.809	1.00	46.58	N
ATOM	4262	CA	PHE C 367	10.945	43.027	105.006	1.00	45.91	C
ATOM	4263	C	PHE C 367	11.205	43.352	106.462	1.00	46.07	C
ATOM	4264	O	PHE C 367	12.240	43.121	107.078	1.00	46.31	O
ATOM	4265	CB	PHE C 367	10.898	44.331	104.205	1.00	45.19	C
ATOM	4266	CG	PHE C 367	12.177	45.108	104.254	1.00	45.43	C
ATOM	4267	CD1	PHE C 367	13.256	44.686	103.505	1.00	44.99	C
ATOM	4268	CD2	PHE C 367	12.322	46.248	105.045	1.00	45.56	C
ATOM	4269	CE1	PHE C 367	14.457	45.378	103.529	1.00	44.64	C
ATOM	4270	CE2	PHE C 367	13.512	46.938	105.070	1.00	45.15	C
ATOM	4271	CZ	PHE C 367	14.587	46.507	104.302	1.00	44.85	C
ATOM	4272	N	VAL C 368	10.183	43.916	107.063	1.00	46.69	N
ATOM	4273	CA	VAL C 368	10.167	44.342	108.456	1.00	48.15	C
ATOM	4274	C	VAL C 368	10.370	43.209	109.433	1.00	49.45	C
ATOM	4275	O	VAL C 368	10.729	43.461	110.576	1.00	51.13	O
ATOM	4276	CB	VAL C 368	8.839	45.093	108.697	1.00	47.28	C
ATOM	4277	CG1	VAL C 368	8.130	44.630	109.922	1.00	46.30	C
ATOM	4278	CG2	VAL C 368	9.166	46.584	108.675	1.00	47.60	C
ATOM	4279	N	ASP C 369	10.179	41.953	109.060	1.00	49.63	N
ATOM	4280	CA	ASP C 369	10.429	40.828	109.904	1.00	49.20	C
ATOM	4281	C	ASP C 369	11.912	40.582	110.004	1.00	47.87	C

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ATOM	4282	O	ASP C 369	12.265	39.674	110.747	1.00	50.06	O
ATOM	4283	CB	ASP C 369	9.807	39.560	109.326	1.00	52.94	C
ATOM	4284	CG	ASP C 369	8.306	39.646	109.140	1.00	57.07	C
ATOM	4285	OD1	ASP C 369	7.536	40.253	109.942	1.00	58.15	O
ATOM	4286	OD2	ASP C 369	7.883	39.050	108.107	1.00	59.37	O
ATOM	4287	N	LEU C 370	12.821	41.214	109.311	1.00	46.81	N
ATOM	4288	CA	LEU C 370	14.258	40.966	109.428	1.00	45.04	C
ATOM	4289	C	LEU C 370	14.866	41.839	110.513	1.00	43.57	C
ATOM	4290	O	LEU C 370	14.254	42.837	110.910	1.00	43.75	O
ATOM	4291	CB	LEU C 370	14.890	41.285	108.071	1.00	45.57	C
ATOM	4292	CG	LEU C 370	14.408	40.389	106.933	1.00	45.97	C
ATOM	4293	CD1	LEU C 370	15.101	40.776	105.637	1.00	46.19	C
ATOM	4294	CD2	LEU C 370	14.724	38.931	107.276	1.00	45.91	C
ATOM	4295	N	THR C 371	16.039	41.536	111.036	1.00	42.53	N
ATOM	4296	CA	THR C 371	16.580	42.386	112.100	1.00	41.92	C
ATOM	4297	C	THR C 371	16.872	43.746	111.509	1.00	42.67	C
ATOM	4298	O	THR C 371	17.204	43.891	110.332	1.00	43.23	O
ATOM	4299	CB	THR C 371	17.873	41.796	112.640	1.00	42.10	C
ATOM	4300	OG1	THR C 371	18.638	41.467	111.456	1.00	43.55	O
ATOM	4301	CG2	THR C 371	17.637	40.557	113.466	1.00	41.52	C
ATOM	4302	N	LEU C 372	16.806	44.784	112.334	1.00	43.35	N
ATOM	4303	CA	LEU C 372	17.071	46.123	111.810	1.00	43.84	C
ATOM	4304	C	LEU C 372	18.357	46.185	111.004	1.00	44.86	C
ATOM	4305	O	LEU C 372	18.366	46.867	109.970	1.00	44.98	O
ATOM	4306	CB	LEU C 372	17.024	47.102	112.965	1.00	42.98	C
ATOM	4307	CG	LEU C 372	15.695	47.307	113.677	1.00	41.37	C
ATOM	4308	CD1	LEU C 372	15.874	48.209	114.886	1.00	41.90	C
ATOM	4309	CD2	LEU C 372	14.703	47.968	112.755	1.00	40.39	C
ATOM	4310	N	HIS C 373	19.435	45.513	111.409	1.00	45.75	N
ATOM	4311	CA	HIS C 373	20.661	45.607	110.630	1.00	47.06	C
ATOM	4312	C	HIS C 373	20.502	44.905	109.308	1.00	46.38	C
ATOM	4313	O	HIS C 373	21.005	45.465	108.331	1.00	45.68	O
ATOM	4314	CB	HIS C 373	21.832	45.143	111.475	1.00	50.24	C
ATOM	4315	CG	HIS C 373	22.249	46.192	112.465	1.00	52.68	C
ATOM	4316	ND1	HIS C 373	21.884	46.194	113.800	1.00	53.78	N
ATOM	4317	CD2	HIS C 373	22.999	47.288	112.334	1.00	53.37	C
ATOM	4318	CE1	HIS C 373	22.421	47.255	114.401	1.00	54.11	C
ATOM	4319	NE2	HIS C 373	23.112	47.959	113.519	1.00	54.30	N
ATOM	4320	N	ASP C 374	19.792	43.778	109.258	1.00	45.87	N
ATOM	4321	CA	ASP C 374	19.599	43.113	107.963	1.00	45.03	C
ATOM	4322	C	ASP C 374	18.832	43.997	107.004	1.00	44.25	C
ATOM	4323	O	ASP C 374	19.180	44.045	105.812	1.00	44.05	O
ATOM	4324	CB	ASP C 374	18.986	41.731	108.142	1.00	46.40	C
ATOM	4325	CG	ASP C 374	20.139	40.886	108.665	1.00	48.80	C
ATOM	4326	OD1	ASP C 374	21.283	41.356	108.487	1.00	49.03	O

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ATOM	4327	OD2 ASP C 374	19.956	39.789	109.239	1.00	52.04	O
ATOM	4328	N GLN C 375	17.840	44.727	107.505	1.00	42.86	N
ATOM	4329	CA GLN C 375	17.146	45.644	106.607	1.00	43.80	C
ATOM	4330	C GLN C 375	18.157	46.609	106.013	1.00	44.68	C
ATOM	4331	O GLN C 375	18.279	46.708	104.785	1.00	46.21	O
ATOM	4332	CB GLN C 375	16.054	46.364	107.360	1.00	44.11	C
ATOM	4333	CG GLN C 375	15.055	45.330	107.884	1.00	45.32	C
ATOM	4334	CD GLN C 375	13.995	45.975	108.756	1.00	45.14	C
ATOM	4335	OE1 GLN C 375	13.644	47.146	108.558	1.00	45.76	O
ATOM	4336	NE2 GLN C 375	13.539	45.165	109.684	1.00	43.96	N
ATOM	4337	N VAL C 376	18.954	47.292	106.838	1.00	44.70	N
ATOM	4338	CA VAL C 376	19.969	48.204	106.286	1.00	43.45	C
ATOM	4339	C VAL C 376	20.825	47.448	105.280	1.00	42.99	C
ATOM	4340	O VAL C 376	21.082	47.946	104.183	1.00	43.34	O
ATOM	4341	CB VAL C 376	20.802	48.880	107.377	1.00	43.11	C
ATOM	4342	CG1 VAL C 376	21.558	50.070	106.822	1.00	42.67	C
ATOM	4343	CG2 VAL C 376	19.911	49.383	108.502	1.00	41.97	C
ATOM	4344	N HIS C 377	21.265	46.236	105.579	1.00	43.23	N
ATOM	4345	CA HIS C 377	22.080	45.474	104.627	1.00	43.53	C
ATOM	4346	C HIS C 377	21.324	45.330	103.324	1.00	43.04	C
ATOM	4347	O HIS C 377	21.851	45.884	102.345	1.00	43.58	O
ATOM	4348	CB HIS C 377	22.565	44.157	105.210	1.00	43.88	C
ATOM	4349	CG AHIS C 377	23.329	43.246	104.319	0.50	42.93	C
ATOM	4350	CG BHIS C 377	23.605	44.341	106.284	0.50	45.50	C
ATOM	4351	ND1AHIS C 377	24.612	43.532	103.911	0.50	43.27	N
ATOM	4352	ND1BHIS C 377	23.539	43.713	107.518	0.50	45.72	N
ATOM	4353	CD2AHIS C 377	23.027	42.059	103.759	0.50	43.01	C
ATOM	4354	CD2BHIS C 377	24.744	45.084	106.330	0.50	45.85	C
ATOM	4355	CE1AHIS C 377	25.068	42.570	103.129	0.50	43.03	C
ATOM	4356	CE1BHIS C 377	24.576	44.040	108.266	0.50	45.34	C
ATOM	4357	NE2AHIS C 377	24.120	41.660	103.017	0.50	43.24	N
ATOM	4358	NE2BHIS C 377	25.323	44.877	107.573	0.50	45.74	N
ATOM	4359	N LEU C 378	20.144	44.722	103.218	1.00	41.73	N
ATOM	4360	CA LEU C 378	19.506	44.633	101.894	1.00	39.74	C
ATOM	4361	C LEU C 378	19.414	45.980	101.229	1.00	39.05	C
ATOM	4362	O LEU C 378	19.645	46.131	100.029	1.00	38.45	O
ATOM	4363	CB LEU C 378	18.166	43.942	102.029	1.00	40.92	C
ATOM	4364	CG LEU C 378	18.149	42.607	102.794	1.00	40.73	C
ATOM	4365	CD1 LEU C 378	16.731	42.064	102.778	1.00	39.45	C
ATOM	4366	CD2 LEU C 378	19.131	41.618	102.174	1.00	40.40	C
ATOM	4367	N LEU C 379	19.087	47.047	101.958	1.00	39.80	N
ATOM	4368	CA LEU C 379	19.026	48.374	101.357	1.00	39.22	C
ATOM	4369	C LEU C 379	20.378	48.746	100.760	1.00	39.44	C
ATOM	4370	O LEU C 379	20.502	48.961	99.553	1.00	38.45	O
ATOM	4371	CB LEU C 379	18.624	49.410	102.390	1.00	39.06	C

ATOM	4372	CG LEU C 379	17.102	49.577	102.329	1.00	41.16	C
ATOM	4373	CD1 LEU C 379	16.695	50.498	103.487	1.00	42.23	C
ATOM	4374	CD2 LEU C 379	16.638	50.058	100.962	1.00	39.87	C
ATOM	4375	N GLU C 380	21.408	48.754	101.613	1.00	39.46	N
ATOM	4376	CA GLU C 380	22.731	49.077	101.106	1.00	41.21	C
ATOM	4377	C GLU C 380	23.065	48.197	99.907	1.00	43.15	C
ATOM	4378	O GLU C 380	23.618	48.688	98.925	1.00	44.47	O
ATOM	4379	CB GLU C 380	23.782	48.891	102.168	1.00	40.84	C
ATOM	4380	CG GLU C 380	23.630	49.843	103.343	1.00	43.56	C
ATOM	4381	CD GLU C 380	24.605	49.421	104.421	1.00	45.48	C
ATOM	4382	OE1 GLU C 380	24.841	48.190	104.554	1.00	48.32	O
ATOM	4383	OE2 GLU C 380	25.142	50.297	105.113	1.00	46.14	O
ATOM	4384	N CYS C 381	22.761	46.910	99.934	1.00	43.99	N
ATOM	4385	CA CYS C 381	23.094	46.074	98.816	1.00	46.04	C
ATOM	4386	C CYS C 381	22.354	46.397	97.544	1.00	44.05	C
ATOM	4387	O CYS C 381	23.000	46.495	96.492	1.00	43.11	O
ATOM	4388	CB CYS C 381	23.004	44.590	99.232	1.00	50.37	C
ATOM	4389	SG CYS C 381	24.674	43.850	99.134	1.00	62.11	S
ATOM	4390	N ALA C 382	21.047	46.577	97.535	1.00	42.04	N
ATOM	4391	CA ALA C 382	20.317	46.827	96.306	1.00	40.32	C
ATOM	4392	C ALA C 382	19.924	48.239	95.932	1.00	40.41	C
ATOM	4393	O ALA C 382	19.214	48.424	94.930	1.00	41.16	O
ATOM	4394	CB ALA C 382	18.994	46.081	96.563	1.00	39.41	C
ATOM	4395	N TRP C 383	20.339	49.290	96.613	1.00	39.21	N
ATOM	4396	CA TRP C 383	19.861	50.629	96.286	1.00	38.58	C
ATOM	4397	C TRP C 383	19.919	51.022	94.832	1.00	38.62	C
ATOM	4398	O TRP C 383	18.907	51.391	94.214	1.00	38.88	O
ATOM	4399	CB TRP C 383	20.549	51.621	97.193	1.00	38.27	C
ATOM	4400	CG TRP C 383	21.976	51.911	96.898	1.00	37.49	C
ATOM	4401	CD1 TRP C 383	23.096	51.275	97.367	1.00	36.51	C
ATOM	4402	CD2 TRP C 383	22.410	52.965	96.034	1.00	36.98	C
ATOM	4403	NE1 TRP C 383	24.209	51.879	96.836	1.00	36.31	N
ATOM	4404	CE2 TRP C 383	23.817	52.912	96.013	1.00	37.09	C
ATOM	4405	CE3 TRP C 383	21.752	53.925	95.278	1.00	37.39	C
ATOM	4406	CZ2 TRP C 383	24.560	53.815	95.265	1.00	37.02	C
ATOM	4407	CZ3 TRP C 383	22.499	54.820	94.535	1.00	36.86	C
ATOM	4408	CH2 TRP C 383	23.879	54.752	94.546	1.00	36.80	C
ATOM	4409	N LEU C 384	21.092	50.927	94.217	1.00	38.24	N
ATOM	4410	CA LEU C 384	21.254	51.275	92.811	1.00	35.66	C
ATOM	4411	C LEU C 384	20.501	50.311	91.924	1.00	35.49	C
ATOM	4412	O LEU C 384	19.944	50.740	90.908	1.00	35.25	O
ATOM	4413	CB LEU C 384	22.726	51.474	92.528	1.00	34.37	C
ATOM	4414	CG LEU C 384	23.101	51.910	91.124	1.00	34.52	C
ATOM	4415	CD1 LEU C 384	22.322	53.170	90.753	1.00	36.30	C
ATOM	4416	CD2 LEU C 384	24.575	52.174	90.976	1.00	33.24	C

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ATOM	4417	N	GLU C 385	20.366	49.026	92.242	1.00	36.66	N
ATOM	4418	CA	GLU C 385	19.592	48.101	91.381	1.00	36.73	C
ATOM	4419	C	GLU C 385	18.156	48.606	91.396	1.00	36.32	C
ATOM	4420	O	GLU C 385	17.586	48.764	90.331	1.00	36.18	O
ATOM	4421	CB	GLU C 385	19.631	46.646	91.793	1.00	36.98	C
ATOM	4422	CG	GLU C 385	20.744	45.799	91.217	1.00	38.26	C
ATOM	4423	CD	GLU C 385	20.746	44.431	91.877	1.00	40.80	C
ATOM	4424	OE1	GLU C 385	21.184	44.430	93.053	1.00	40.15	O
ATOM	4425	OE2	GLU C 385	20.312	43.407	91.233	1.00	42.88	O
ATOM	4426	N	ILE C 386	17.622	48.885	92.583	1.00	36.97	N
ATOM	4427	CA	ILE C 386	16.274	49.440	92.700	1.00	37.86	C
ATOM	4428	C	ILE C 386	16.144	50.736	91.890	1.00	37.45	C
ATOM	4429	O	ILE C 386	15.223	50.827	91.097	1.00	36.77	O
ATOM	4430	CB	ILE C 386	15.787	49.856	94.101	1.00	37.56	C
ATOM	4431	CG1	ILE C 386	16.070	48.839	95.198	1.00	39.75	C
ATOM	4432	CG2	ILE C 386	14.305	50.108	93.982	1.00	36.22	C
ATOM	4433	CD1	ILE C 386	15.603	47.419	94.936	1.00	41.09	C
ATOM	4434	N	LEU C 387	17.044	51.709	92.073	1.00	37.87	N
ATOM	4435	CA	LEU C 387	16.950	52.930	91.293	1.00	38.37	C
ATOM	4436	C	LEU C 387	16.962	52.657	89.788	1.00	39.64	C
ATOM	4437	O	LEU C 387	16.178	53.276	89.051	1.00	41.78	O
ATOM	4438	CB	LEU C 387	18.082	53.904	91.516	1.00	37.68	C
ATOM	4439	CG	LEU C 387	18.075	54.695	92.807	1.00	39.20	C
ATOM	4440	CD1	LEU C 387	19.351	55.542	92.861	1.00	38.76	C
ATOM	4441	CD2	LEU C 387	16.808	55.529	92.950	1.00	39.28	C
ATOM	4442	N	MET C 388	17.840	51.761	89.328	1.00	38.86	N
ATOM	4443	CA	MET C 388	17.900	51.493	87.903	1.00	37.45	C
ATOM	4444	C	MET C 388	16.660	50.809	87.390	1.00	37.36	C
ATOM	4445	O	MET C 388	16.235	51.218	86.311	1.00	37.34	O
ATOM	4446	CB	MET C 388	19.114	50.708	87.471	1.00	37.38	C
ATOM	4447	CG	MET C 388	20.453	51.222	87.945	1.00	39.07	C
ATOM	4448	SD	MET C 388	21.833	50.517	87.012	1.00	41.23	S
ATOM	4449	CE	MET C 388	23.154	51.662	87.373	1.00	40.53	C
ATOM	4450	N	ILE C 389	16.049	49.858	88.089	1.00	38.77	N
ATOM	4451	CA	ILE C 389	14.869	49.200	87.483	1.00	39.72	C
ATOM	4452	C	ILE C 389	13.739	50.212	87.406	1.00	41.12	C
ATOM	4453	O	ILE C 389	12.907	50.203	86.509	1.00	42.85	O
ATOM	4454	CB	ILE C 389	14.473	47.884	88.150	1.00	38.24	C
ATOM	4455	CG1	ILE C 389	13.320	47.206	87.412	1.00	37.90	C
ATOM	4456	CG2	ILE C 389	14.076	48.091	89.592	1.00	38.06	C
ATOM	4457	CD1	ILE C 389	13.160	45.733	87.685	1.00	36.97	C
ATOM	4458	N	GLY C 390	13.724	51.176	88.304	1.00	41.78	N
ATOM	4459	CA	GLY C 390	12.674	52.183	88.293	1.00	43.51	C
ATOM	4460	C	GLY C 390	12.829	53.038	87.046	1.00	42.96	C
ATOM	4461	O	GLY C 390	11.858	53.250	86.329	1.00	43.30	O

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ATOM	4462	N	LEU C 391	14.058	53.497	86.851	1.00	42.39	N
ATOM	4463	CA	LEU C 391	14.309	54.343	85.679	1.00	42.48	C
ATOM	4464	C	LEU C 391	13.889	53.586	84.434	1.00	43.75	C
ATOM	4465	O	LEU C 391	13.060	54.004	83.635	1.00	44.31	O
ATOM	4466	CB	LEU C 391	15.790	54.665	85.609	1.00	42.32	C
ATOM	4467	CG	LEU C 391	16.325	55.261	84.318	1.00	42.43	C
ATOM	4468	CD1	LEU C 391	15.626	56.583	84.058	1.00	42.19	C
ATOM	4469	CD2	LEU C 391	17.840	55.475	84.358	1.00	42.78	C
ATOM	4470	N	VAL C 392	14.451	52.387	84.261	1.00	44.61	N
ATOM	4471	CA	VAL C 392	14.127	51.568	83.101	1.00	45.11	C
ATOM	4472	C	VAL C 392	12.622	51.507	82.873	1.00	46.00	C
ATOM	4473	O	VAL C 392	12.078	51.724	81.787	1.00	46.72	O
ATOM	4474	CB	VAL C 392	14.752	50.167	83.237	1.00	43.59	C
ATOM	4475	CG1	VAL C 392	14.210	49.215	82.193	1.00	43.32	C
ATOM	4476	CG2	VAL C 392	16.262	50.250	82.999	1.00	42.75	C
ATOM	4477	N	TRP C 393	11.902	51.174	83.924	1.00	46.93	N
ATOM	4478	CA	TRP C 393	10.453	51.019	83.882	1.00	48.43	C
ATOM	4479	C	TRP C 393	9.711	52.279	83.483	1.00	48.79	C
ATOM	4480	O	TRP C 393	8.759	52.185	82.700	1.00	50.67	O
ATOM	4481	CB	TRP C 393	9.937	50.621	85.262	1.00	48.30	C
ATOM	4482	CG	TRP C 393	8.481	50.845	85.442	1.00	48.18	C
ATOM	4483	CD1	TRP C 393	7.912	51.799	86.217	1.00	49.07	C
ATOM	4484	CD2	TRP C 393	7.408	50.122	84.849	1.00	48.75	C
ATOM	4485	NE1	TRP C 393	6.537	51.695	86.155	1.00	49.00	N
ATOM	4486	CE2	TRP C 393	6.206	50.675	85.324	1.00	48.09	C
ATOM	4487	CE3	TRP C 393	7.349	49.030	83.968	1.00	49.78	C
ATOM	4488	CZ2	TRP C 393	4.957	50.202	84.956	1.00	48.08	C
ATOM	4489	CZ3	TRP C 393	6.099	48.547	83.591	1.00	49.68	C
ATOM	4490	CH2	TRP C 393	4.928	49.138	84.089	1.00	49.25	C
ATOM	4491	N	ARG C 394	10.139	53.406	84.060	1.00	48.09	N
ATOM	4492	CA	ARG C 394	9.450	54.634	83.700	1.00	47.92	C
ATOM	4493	C	ARG C 394	9.934	55.088	82.344	1.00	49.43	C
ATOM	4494	O	ARG C 394	9.287	55.925	81.730	1.00	51.46	O
ATOM	4495	CB	ARG C 394	9.503	55.746	84.710	1.00	46.47	C
ATOM	4496	CG	ARG C 394	10.763	56.081	85.415	1.00	45.70	C
ATOM	4497	CD	ARG C 394	10.566	57.207	86.424	1.00	44.60	C
ATOM	4498	NE	ARG C 394	11.920	57.710	86.742	1.00	44.81	N
ATOM	4499	CZ	ARG C 394	12.693	57.162	87.681	1.00	43.57	C
ATOM	4500	NH1	ARG C 394	12.145	56.129	88.322	1.00	43.13	N
ATOM	4501	NH2	ARG C 394	13.896	57.673	87.883	1.00	41.36	N
ATOM	4502	N	SER C 395	11.021	54.572	81.810	1.00	51.47	N
ATOM	4503	CA	SER C 395	11.529	55.002	80.516	1.00	51.90	C
ATOM	4504	C	SER C 395	10.991	54.173	79.388	1.00	53.62	C
ATOM	4505	O	SER C 395	11.334	54.434	78.247	1.00	54.61	O
ATOM	4506	CB	SER C 395	13.065	54.848	80.552	1.00	50.43	C

ATOM	4507	OG	SER C 395	13.612	55.991	81.184	1.00	48.96	O
ATOM	4508	N	MET C 396	10.218	53.150	79.665	1.00	56.89	N
ATOM	4509	CA	MET C 396	9.697	52.238	78.670	1.00	60.23	C
ATOM	4510	C	MET C 396	9.095	52.842	77.413	1.00	63.30	C
ATOM	4511	O	MET C 396	9.523	52.504	76.297	1.00	63.66	O
ATOM	4512	CB	MET C 396	8.583	51.406	79.298	1.00	59.55	C
ATOM	4513	CG	MET C 396	8.723	49.930	79.002	1.00	59.80	C
ATOM	4514	SD	MET C 396	7.886	49.083	80.359	1.00	61.85	S
ATOM	4515	CE	MET C 396	6.596	48.204	79.499	1.00	61.89	C
ATOM	4516	N	GLU C 397	8.110	53.729	77.604	1.00	66.03	N
ATOM	4517	CA	GLU C 397	7.439	54.322	76.470	1.00	69.27	C
ATOM	4518	C	GLU C 397	8.151	55.504	75.901	1.00	67.82	C
ATOM	4519	O	GLU C 397	7.474	56.429	75.435	1.00	69.29	O
ATOM	4520	CB	GLU C 397	6.018	54.786	76.785	1.00	74.53	C
ATOM	4521	CG	GLU C 397	5.187	53.758	77.541	1.00	81.19	C
ATOM	4522	CD	GLU C 397	5.613	53.797	79.002	1.00	85.34	C
ATOM	4523	OE1	GLU C 397	6.269	54.817	79.359	1.00	86.81	O
ATOM	4524	OE2	GLU C 397	5.316	52.820	79.737	1.00	88.67	O
ATOM	4525	N	HIS C 398	9.452	55.666	75.936	1.00	65.73	N
ATOM	4526	CA	HIS C 398	10.154	56.801	75.368	1.00	64.19	C
ATOM	4527	C	HIS C 398	11.390	56.162	74.750	1.00	63.33	C
ATOM	4528	O	HIS C 398	12.489	56.333	75.265	1.00	64.80	O
ATOM	4529	CB	HIS C 398	10.584	57.864	76.359	1.00	65.69	C
ATOM	4530	CG	HIS C 398	9.454	58.536	77.071	1.00	67.75	C
ATOM	4531	ND1	HIS C 398	8.465	57.788	77.699	1.00	68.11	N
ATOM	4532	CD2	HIS C 398	9.121	59.824	77.286	1.00	68.37	C
ATOM	4533	CE1	HIS C 398	7.559	58.547	78.254	1.00	68.33	C
ATOM	4534	NE2	HIS C 398	7.943	59.791	78.021	1.00	69.24	N
ATOM	4535	N	PRO C 399	11.169	55.409	73.695	1.00	61.57	N
ATOM	4536	CA	PRO C 399	12.201	54.677	72.989	1.00	60.18	C
ATOM	4537	C	PRO C 399	13.406	55.548	72.785	1.00	59.34	C
ATOM	4538	O	PRO C 399	13.227	56.719	72.471	1.00	60.76	O
ATOM	4539	CB	PRO C 399	11.624	54.256	71.635	1.00	60.20	C
ATOM	4540	CG	PRO C 399	10.177	54.105	72.045	1.00	61.13	C
ATOM	4541	CD	PRO C 399	9.883	55.172	73.063	1.00	61.15	C
ATOM	4542	N	GLY C 400	14.584	55.028	73.029	1.00	58.02	N
ATOM	4543	CA	GLY C 400	15.779	55.810	72.817	1.00	57.60	C
ATOM	4544	C	GLY C 400	16.055	56.848	73.866	1.00	57.41	C
ATOM	4545	O	GLY C 400	17.142	57.465	73.774	1.00	59.48	O
ATOM	4546	N	LYS C 401	15.168	57.029	74.824	1.00	55.91	N
ATOM	4547	CA	LYS C 401	15.375	58.004	75.873	1.00	56.17	C
ATOM	4548	C	LYS C 401	15.214	57.440	77.288	1.00	54.71	C
ATOM	4549	O	LYS C 401	14.614	56.395	77.534	1.00	53.87	O
ATOM	4550	CB	LYS C 401	14.325	59.092	75.773	1.00	58.67	C
ATOM	4551	CG	LYS C 401	13.985	59.693	74.445	1.00	61.64	C

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ATOM	4552	CD	LYS	C	401	14.427	61.151	74.430	1.00	65.11	C
ATOM	4553	CE	LYS	C	401	14.542	61.641	72.981	1.00	67.59	C
ATOM	4554	NZ	LYS	C	401	13.246	61.350	72.280	1.00	69.74	N
ATOM	4555	N	LEU	C	402	15.779	58.197	78.237	1.00	52.97	N
ATOM	4556	CA	LEU	C	402	15.677	57.798	79.633	1.00	51.50	C
ATOM	4557	C	LEU	C	402	14.992	58.955	80.369	1.00	51.85	C
ATOM	4558	O	LEU	C	402	15.521	60.054	80.393	1.00	53.19	O
ATOM	4559	CB	LEU	C	402	16.964	57.447	80.351	1.00	49.69	C
ATOM	4560	CG	LEU	C	402	17.851	56.373	79.718	1.00	49.68	C
ATOM	4561	CD1	LEU	C	402	19.287	56.488	80.234	1.00	50.38	C
ATOM	4562	CD2	LEU	C	402	17.294	54.994	79.981	1.00	48.23	C
ATOM	4563	N	LEU	C	403	13.839	58.682	80.954	1.00	50.40	N
ATOM	4564	CA	LEU	C	403	13.081	59.626	81.718	1.00	48.45	C
ATOM	4565	C	LEU	C	403	13.512	59.661	83.179	1.00	48.30	C
ATOM	4566	O	LEU	C	403	12.791	59.107	84.044	1.00	48.45	O
ATOM	4567	CB	LEU	C	403	11.627	59.089	81.682	1.00	49.68	C
ATOM	4568	CG	LEU	C	403	10.615	60.185	82.065	1.00	50.71	C
ATOM	4569	CD1	LEU	C	403	10.293	60.996	80.809	1.00	51.19	C
ATOM	4570	CD2	LEU	C	403	9.380	59.647	82.741	1.00	49.84	C
ATOM	4571	N	PHE	C	404	14.630	60.288	83.541	1.00	46.98	N
ATOM	4572	CA	PHE	C	404	14.970	60.320	84.961	1.00	48.30	C
ATOM	4573	C	PHE	C	404	13.836	60.915	85.775	1.00	49.83	C
ATOM	4574	O	PHE	C	404	13.580	60.414	86.866	1.00	51.43	O
ATOM	4575	CB	PHE	C	404	16.226	61.130	85.280	1.00	48.64	C
ATOM	4576	CG	PHE	C	404	17.425	60.327	84.795	1.00	48.37	C
ATOM	4577	CD1	PHE	C	404	17.800	60.434	83.458	1.00	48.17	C
ATOM	4578	CD2	PHE	C	404	18.103	59.502	85.667	1.00	46.52	C
ATOM	4579	CE1	PHE	C	404	18.895	59.703	83.021	1.00	48.22	C
ATOM	4580	CE2	PHE	C	404	19.175	58.782	85.210	1.00	46.80	C
ATOM	4581	CZ	PHE	C	404	19.570	58.879	83.895	1.00	47.75	C
ATOM	4582	N	ALA	C	405	13.201	61.957	85.274	1.00	51.16	N
ATOM	4583	CA	ALA	C	405	12.070	62.610	85.902	1.00	52.86	C
ATOM	4584	C	ALA	C	405	11.034	62.927	84.842	1.00	54.10	C
ATOM	4585	O	ALA	C	405	11.310	62.883	83.645	1.00	55.12	O
ATOM	4586	CB	ALA	C	405	12.503	63.923	86.523	1.00	53.22	C
ATOM	4587	N	PRO	C	406	9.859	63.371	85.265	1.00	54.59	N
ATOM	4588	CA	PRO	C	406	8.756	63.751	84.392	1.00	54.59	C
ATOM	4589	C	PRO	C	406	9.286	64.957	83.628	1.00	55.67	C
ATOM	4590	O	PRO	C	406	8.951	65.111	82.454	1.00	57.69	O
ATOM	4591	CB	PRO	C	406	7.513	64.076	85.207	1.00	53.31	C
ATOM	4592	CG	PRO	C	406	7.920	63.562	86.550	1.00	54.36	C
ATOM	4593	CD	PRO	C	406	9.441	63.515	86.650	1.00	54.76	C
ATOM	4594	N	ASN	C	407	10.124	65.747	84.294	1.00	54.37	N
ATOM	4595	CA	ASN	C	407	10.666	66.900	83.627	1.00	54.98	C
ATOM	4596	C	ASN	C	407	12.134	66.771	83.364	1.00	56.61	C

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ATOM	4597	O	ASN C 407	12.807	67.823	83.363	1.00	58.57	O
ATOM	4598	CB	ASN C 407	10.395	68.094	84.545	1.00	56.37	C
ATOM	4599	CG	ASN C 407	11.294	68.099	85.754	1.00	57.71	C
ATOM	4600	OD1	ASN C 407	11.531	67.014	86.284	1.00	59.64	O
ATOM	4601	ND2	ASN C 407	11.801	69.256	86.154	1.00	58.26	N
ATOM	4602	N	LEU C 408	12.686	65.576	83.181	1.00	56.99	N
ATOM	4603	CA	LEU C 408	14.146	65.473	82.904	1.00	55.41	C
ATOM	4604	C	LEU C 408	14.219	64.222	82.040	1.00	55.97	C
ATOM	4605	O	LEU C 408	14.109	63.149	82.598	1.00	56.50	O
ATOM	4606	CB	LEU C 408	15.089	65.335	84.053	1.00	54.52	C
ATOM	4607	CG	LEU C 408	16.569	65.128	83.809	1.00	54.24	C
ATOM	4608	CD1	LEU C 408	17.104	66.091	82.769	1.00	53.95	C
ATOM	4609	CD2	LEU C 408	17.384	65.329	85.094	1.00	53.88	C
ATOM	4610	N	LEU C 409	14.308	64.456	80.734	1.00	57.08	N
ATOM	4611	CA	LEU C 409	14.309	63.330	79.787	1.00	55.96	C
ATOM	4612	C	LEU C 409	15.567	63.337	78.956	1.00	56.04	C
ATOM	4613	O	LEU C 409	15.586	63.895	77.877	1.00	57.84	O
ATOM	4614	CB	LEU C 409	13.030	63.486	78.998	1.00	54.81	C
ATOM	4615	CG	LEU C 409	12.647	62.605	77.850	1.00	55.15	C
ATOM	4616	CD1	LEU C 409	13.171	61.197	77.983	1.00	56.09	C
ATOM	4617	CD2	LEU C 409	11.118	62.533	77.809	1.00	56.34	C
ATOM	4618	N	LEU C 410	16.661	62.755	79.426	1.00	56.42	N
ATOM	4619	CA	LEU C 410	17.887	62.705	78.659	1.00	56.78	C
ATOM	4620	C	LEU C 410	17.732	61.676	77.546	1.00	58.87	C
ATOM	4621	O	LEU C 410	16.951	60.737	77.557	1.00	59.41	O
ATOM	4622	CB	LEU C 410	19.119	62.420	79.502	1.00	54.89	C
ATOM	4623	CG	LEU C 410	19.101	63.347	80.726	1.00	54.76	C
ATOM	4624	CD1	LEU C 410	20.290	63.109	81.642	1.00	55.52	C
ATOM	4625	CD2	LEU C 410	19.048	64.777	80.244	1.00	54.19	C
ATOM	4626	N	ASP C 411	18.539	61.940	76.548	1.00	61.11	N
ATOM	4627	CA	ASP C 411	18.605	61.170	75.320	1.00	63.70	C
ATOM	4628	C	ASP C 411	19.943	60.474	75.274	1.00	63.50	C
ATOM	4629	O	ASP C 411	20.925	60.988	75.816	1.00	62.27	O
ATOM	4630	CB	ASP C 411	18.380	62.255	74.264	1.00	67.47	C
ATOM	4631	CG	ASP C 411	19.067	61.906	72.976	1.00	70.92	C
ATOM	4632	OD1	ASP C 411	20.306	62.046	72.993	1.00	72.96	O
ATOM	4633	OD2	ASP C 411	18.346	61.492	72.045	1.00	73.48	O
ATOM	4634	N	ARG C 412	20.026	59.312	74.619	1.00	64.17	N
ATOM	4635	CA	ARG C 412	21.286	58.583	74.613	1.00	64.66	C
ATOM	4636	C	ARG C 412	22.502	59.478	74.508	1.00	65.32	C
ATOM	4637	O	ARG C 412	23.414	59.482	75.322	1.00	65.53	O
ATOM	4638	CB	ARG C 412	21.350	57.512	73.524	1.00	64.52	C
ATOM	4639	CG	ARG C 412	22.802	57.099	73.303	1.00	64.53	C
ATOM	4640	CD	ARG C 412	22.914	55.827	72.505	1.00	65.97	C
ATOM	4641	NE	ARG C 412	24.248	55.232	72.640	1.00	67.01	N

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ATOM 4642 CZ ARG C 412	25.373 55.780 72.193 1.00 67.73	C
ATOM 4643 NH1 ARG C 412	25.379 56.961 71.564 1.00 68.04	N
ATOM 4644 NH2 ARG C 412	26.531 55.145 72.370 1.00 67.64	N
ATOM 4645 N ASN C 413	22.590 60.264 73.461 1.00 67.18	N
ATOM 4646 CA ASN C 413	23.727 61.134 73.215 1.00 69.57	C
ATOM 4647 C ASN C 413	24.062 62.069 74.338 1.00 68.89	C
ATOM 4648 O ASN C 413	25.249 62.371 74.517 1.00 69.37	O
ATOM 4649 CB ASN C 413	23.457 61.894 71.902 1.00 73.23	C
ATOM 4650 CG ASN C 413	23.211 60.796 70.856 1.00 76.66	C
ATOM 4651 OD1 ASN C 413	24.175 60.090 70.514 1.00 77.59	O
ATOM 4652 ND2 ASN C 413	21.937 60.700 70.451 1.00 78.09	N
ATOM 4653 N GLN C 414	23.126 62.512 75.161 1.00 67.79	N
ATOM 4654 CA GLN C 414	23.439 63.399 76.274 1.00 67.35	C
ATOM 4655 C GLN C 414	24.282 62.671 77.308 1.00 67.26	C
ATOM 4656 O GLN C 414	24.986 63.252 78.133 1.00 66.80	O
ATOM 4657 CB GLN C 414	22.170 63.973 76.860 1.00 68.30	C
ATOM 4658 CG GLN C 414	21.127 64.314 75.798 1.00 69.45	C
ATOM 4659 CD GLN C 414	20.117 65.274 76.396 1.00 70.67	C
ATOM 4660 OE1 GLN C 414	18.908 65.040 76.412 1.00 71.62	O
ATOM 4661 NE2 GLN C 414	20.685 66.362 76.900 1.00 71.81	N
ATOM 4662 N GLY C 415	24.280 61.344 77.244 1.00 67.32	N
ATOM 4663 CA GLY C 415	25.114 60.498 78.069 1.00 67.57	C
ATOM 4664 C GLY C 415	26.543 60.925 77.798 1.00 67.85	C
ATOM 4665 O GLY C 415	27.295 61.154 78.738 1.00 68.28	O
ATOM 4666 N LYS C 416	26.974 61.147 76.566 1.00 69.42	N
ATOM 4667 CA LYS C 416	28.343 61.564 76.260 1.00 70.20	C
ATOM 4668 C LYS C 416	28.826 62.756 77.069 1.00 68.84	C
ATOM 4669 O LYS C 416	30.035 62.973 77.197 1.00 68.46	O
ATOM 4670 CB LYS C 416	28.536 61.814 74.774 1.00 72.02	C
ATOM 4671 CG LYS C 416	27.801 60.834 73.887 1.00 75.13	C
ATOM 4672 CD LYS C 416	28.735 60.255 72.828 1.00 78.53	C
ATOM 4673 CE LYS C 416	28.299 60.701 71.428 1.00 80.96	C
ATOM 4674 NZ LYS C 416	27.171 59.853 70.902 1.00 82.97	N
ATOM 4675 N CYS C 417	27.957 63.544 77.671 1.00 67.72	N
ATOM 4676 CA CYS C 417	28.400 64.669 78.473 1.00 68.04	C
ATOM 4677 C CYS C 417	29.289 64.173 79.591 1.00 65.78	C
ATOM 4678 O CYS C 417	30.319 64.804 79.839 1.00 66.63	O
ATOM 4679 CB CYS C 417	27.189 65.495 78.933 1.00 70.16	C
ATOM 4680 SG CYS C 417	26.344 66.190 77.467 1.00 75.80	S
ATOM 4681 N VAL C 418	28.954 63.094 80.279 1.00 63.41	N
ATOM 4682 CA VAL C 418	29.782 62.604 81.370 1.00 61.12	C
ATOM 4683 C VAL C 418	30.653 61.452 80.918 1.00 60.84	C
ATOM 4684 O VAL C 418	30.146 60.621 80.184 1.00 60.27	O
ATOM 4685 CB VAL C 418	28.910 62.163 82.549 1.00 60.20	C
ATOM 4686 CG1 VAL C 418	29.739 61.551 83.665 1.00 60.01	C

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ATOM	4687	CG2 VAL C 418	28.137	63.359	83.076	1.00	59.97	C
ATOM	4688	N GLU C 419	31.894	61.419	81.335	1.00	62.11	N
ATOM	4689	CA GLU C 419	32.844	60.376	81.019	1.00	64.89	C
ATOM	4690	C GLU C 419	32.362	58.995	81.400	1.00	64.14	C
ATOM	4691	O GLU C 419	31.817	58.720	82.462	1.00	64.65	O
ATOM	4692	CB GLU C 419	34.097	60.663	81.830	1.00	69.95	C
ATOM	4693	CG GLU C 419	35.415	60.468	81.108	1.00	77.04	C
ATOM	4694	CD GLU C 419	36.572	60.336	82.092	1.00	82.02	C
ATOM	4695	OE1 GLU C 419	36.507	60.945	83.209	1.00	84.55	O
ATOM	4696	OE2 GLU C 419	37.561	59.616	81.759	1.00	84.42	O
ATOM	4697	N GLY C 420	32.489	58.009	80.543	1.00	63.83	N
ATOM	4698	CA GLY C 420	32.053	56.657	80.783	1.00	63.46	C
ATOM	4699	C GLY C 420	30.585	56.411	81.000	1.00	63.33	C
ATOM	4700	O GLY C 420	30.235	55.276	81.342	1.00	64.98	O
ATOM	4701	N MET C 421	29.655	57.314	80.838	1.00	62.92	N
ATOM	4702	CA MET C 421	28.242	57.162	81.035	1.00	61.73	C
ATOM	4703	C MET C 421	27.448	56.561	79.900	1.00	60.56	C
ATOM	4704	O MET C 421	26.393	55.981	80.122	1.00	60.92	O
ATOM	4705	CB MET C 421	27.639	58.571	81.229	1.00	62.59	C
ATOM	4706	CG MET C 421	27.591	58.918	82.704	1.00	64.61	C
ATOM	4707	SD MET C 421	25.913	58.610	83.314	1.00	67.20	S
ATOM	4708	CE MET C 421	25.173	60.208	82.895	1.00	66.86	C
ATOM	4709	N VAL C 422	27.896	56.713	78.674	1.00	59.89	N
ATOM	4710	CA VAL C 422	27.177	56.240	77.518	1.00	59.46	C
ATOM	4711	C VAL C 422	26.908	54.752	77.584	1.00	59.13	C
ATOM	4712	O VAL C 422	25.812	54.359	77.160	1.00	58.65	O
ATOM	4713	CB VAL C 422	27.919	56.440	76.175	1.00	60.40	C
ATOM	4714	CG1 VAL C 422	26.932	56.991	75.156	1.00	61.42	C
ATOM	4715	CG2 VAL C 422	29.108	57.357	76.338	1.00	61.57	C
ATOM	4716	N GLU C 423	27.910	53.993	78.049	1.00	58.67	N
ATOM	4717	CA GLU C 423	27.762	52.547	78.109	1.00	58.29	C
ATOM	4718	C GLU C 423	26.674	52.185	79.114	1.00	55.80	C
ATOM	4719	O GLU C 423	25.911	51.254	78.862	1.00	56.05	O
ATOM	4720	CB GLU C 423	29.023	51.835	78.541	1.00	62.43	C
ATOM	4721	CG GLU C 423	30.178	52.163	77.618	1.00	69.18	C
ATOM	4722	CD GLU C 423	30.915	53.376	78.163	1.00	72.99	C
ATOM	4723	OE1 GLU C 423	30.415	54.513	78.012	1.00	74.11	O
ATOM	4724	OE2 GLU C 423	32.004	53.165	78.762	1.00	76.42	O
ATOM	4725	N ILE C 424	26.662	52.944	80.214	1.00	51.13	N
ATOM	4726	CA ILE C 424	25.646	52.689	81.221	1.00	47.44	C
ATOM	4727	C ILE C 424	24.324	53.032	80.585	1.00	47.25	C
ATOM	4728	O ILE C 424	23.394	52.213	80.556	1.00	48.16	O
ATOM	4729	CB ILE C 424	26.040	53.450	82.464	1.00	46.56	C
ATOM	4730	CG1 ILE C 424	27.332	52.804	82.970	1.00	46.07	C
ATOM	4731	CG2 ILE C 424	25.006	53.384	83.575	1.00	47.25	C

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ATOM	4732	CD1 ILE C 424	27.866	53.608	84.134	1.00	47.35	C
ATOM	4733	N PHE C 425	24.189	54.195	79.974	1.00	46.49	N
ATOM	4734	CA PHE C 425	22.962	54.562	79.295	1.00	46.97	C
ATOM	4735	C PHE C 425	22.565	53.492	78.288	1.00	48.46	C
ATOM	4736	O PHE C 425	21.393	53.143	78.086	1.00	49.04	O
ATOM	4737	CB PHE C 425	23.180	55.885	78.557	1.00	46.87	C
ATOM	4738	CG PHE C 425	22.888	57.092	79.393	1.00	48.05	C
ATOM	4739	CD1 PHE C 425	23.145	57.065	80.762	1.00	48.83	C
ATOM	4740	CD2 PHE C 425	22.367	58.239	78.833	1.00	47.47	C
ATOM	4741	CE1 PHE C 425	22.893	58.154	81.559	1.00	48.88	C
ATOM	4742	CE2 PHE C 425	22.117	59.331	79.629	1.00	48.48	C
ATOM	4743	CZ PHE C 425	22.367	59.296	80.987	1.00	49.12	C
ATOM	4744	N ASP C 426	23.558	52.958	77.570	1.00	49.47	N
ATOM	4745	CA ASP C 426	23.266	51.937	76.563	1.00	50.25	C
ATOM	4746	C ASP C 426	22.610	50.731	77.181	1.00	49.70	C
ATOM	4747	O ASP C 426	21.476	50.383	76.828	1.00	50.01	O
ATOM	4748	CB ASP C 426	24.551	51.740	75.805	1.00	52.75	C
ATOM	4749	CG ASP C 426	24.595	52.714	74.634	1.00	54.97	C
ATOM	4750	OD1 ASP C 426	23.525	53.281	74.348	1.00	55.90	O
ATOM	4751	OD2 ASP C 426	25.664	52.879	73.997	1.00	56.89	O
ATOM	4752	N MET C 427	23.221	50.136	78.189	1.00	48.67	N
ATOM	4753	CA MET C 427	22.654	49.011	78.926	1.00	46.57	C
ATOM	4754	C MET C 427	21.269	49.358	79.451	1.00	44.91	C
ATOM	4755	O MET C 427	20.324	48.563	79.360	1.00	43.81	O
ATOM	4756	CB MET C 427	23.601	48.677	80.073	1.00	47.06	C
ATOM	4757	CG MET C 427	24.878	48.082	79.506	1.00	48.41	C
ATOM	4758	SD MET C 427	25.971	47.555	80.836	1.00	51.63	S
ATOM	4759	CE MET C 427	26.608	49.120	81.414	1.00	49.68	C
ATOM	4760	N LEU C 428	21.153	50.574	80.004	1.00	43.29	N
ATOM	4761	CA LEU C 428	19.838	50.987	80.499	1.00	42.10	C
ATOM	4762	C LEU C 428	18.822	50.985	79.362	1.00	42.51	C
ATOM	4763	O LEU C 428	17.739	50.400	79.519	1.00	43.36	O
ATOM	4764	CB LEU C 428	19.930	52.326	81.199	1.00	40.36	C
ATOM	4765	CG LEU C 428	20.679	52.318	82.525	1.00	39.49	C
ATOM	4766	CD1 LEU C 428	20.986	53.753	82.919	1.00	40.04	C
ATOM	4767	CD2 LEU C 428	19.870	51.656	83.622	1.00	39.72	C
ATOM	4768	N LEU C 429	19.151	51.560	78.204	1.00	42.16	N
ATOM	4769	CA LEU C 429	18.183	51.592	77.113	1.00	41.54	C
ATOM	4770	C LEU C 429	17.793	50.203	76.669	1.00	42.36	C
ATOM	4771	O LEU C 429	16.604	49.871	76.501	1.00	42.94	O
ATOM	4772	CB LEU C 429	18.718	52.463	76.002	1.00	41.60	C
ATOM	4773	CG LEU C 429	18.748	53.963	76.311	1.00	41.87	C
ATOM	4774	CD1 LEU C 429	19.684	54.692	75.361	1.00	42.41	C
ATOM	4775	CD2 LEU C 429	17.347	54.549	76.281	1.00	40.73	C
ATOM	4776	N ALA C 430	18.796	49.343	76.515	1.00	42.18	N

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ATOM 4777 CA ALA C 430	18.544 47.963 76.137 1.00 42.04	C
ATOM 4778 C ALA C 430	17.580 47.280 77.101 1.00 42.71	C
ATOM 4779 O ALA C 430	16.751 46.465 76.666 1.00 44.50	O
ATOM 4780 CB ALA C 430	19.866 47.211 76.195 1.00 42.17	C
ATOM 4781 N THR C 431	17.670 47.540 78.401 1.00 41.61	N
ATOM 4782 CA THR C 431	16.764 46.859 79.309 1.00 41.93	C
ATOM 4783 C THR C 431	15.378 47.412 79.090 1.00 42.69	C
ATOM 4784 O THR C 431	14.347 46.744 79.063 1.00 41.58	O
ATOM 4785 CB THR C 431	17.133 47.151 80.772 1.00 42.56	C
ATOM 4786 OG1 THR C 431	18.546 46.950 80.878 1.00 44.44	O
ATOM 4787 CG2 THR C 431	16.344 46.278 81.723 1.00 40.93	C
ATOM 4788 N SER C 432	15.404 48.745 78.942 1.00 45.20	N
ATOM 4789 CA SER C 432	14.149 49.490 78.767 1.00 46.82	C
ATOM 4790 C SER C 432	13.390 48.962 77.561 1.00 46.53	C
ATOM 4791 O SER C 432	12.191 48.710 77.540 1.00 46.14	O
ATOM 4792 CB SER C 432	14.392 50.986 78.698 1.00 47.74	C
ATOM 4793 OG SER C 432	13.074 51.509 78.440 1.00 50.00	O
ATOM 4794 N SER C 433	14.150 48.747 76.514 1.00 47.34	N
ATOM 4795 CA SER C 433	13.668 48.149 75.292 1.00 49.60	C
ATOM 4796 C SER C 433	13.123 46.748 75.472 1.00 49.87	C
ATOM 4797 O SER C 433	12.017 46.389 75.083 1.00 49.55	O
ATOM 4798 CB SER C 433	14.950 48.089 74.459 1.00 51.76	C
ATOM 4799 OG SER C 433	14.471 47.977 73.129 1.00 57.08	O
ATOM 4800 N ARG C 434	13.863 45.867 76.147 1.00 51.89	N
ATOM 4801 CA ARG C 434	13.411 44.512 76.446 1.00 53.04	C
ATOM 4802 C ARG C 434	12.110 44.574 77.248 1.00 53.63	C
ATOM 4803 O ARG C 434	11.188 43.778 77.007 1.00 52.87	O
ATOM 4804 CB ARG C 434	14.457 43.666 77.163 1.00 53.71	C
ATOM 4805 CG ARG C 434	13.927 42.293 77.511 1.00 56.12	C
ATOM 4806 CD ARG C 434	14.802 41.123 77.122 1.00 58.81	C
ATOM 4807 NE ARG C 434	14.084 39.828 77.305 1.00 60.35	N
ATOM 4808 CZ ARG C 434	13.212 39.481 76.350 1.00 61.02	C
ATOM 4809 NH1 ARG C 434	13.079 40.337 75.335 1.00 61.96	N
ATOM 4810 NH2 ARG C 434	12.520 38.360 76.397 1.00 61.44	N
ATOM 4811 N PHE C 435	11.994 45.517 78.200 1.00 54.32	N
ATOM 4812 CA PHE C 435	10.747 45.613 78.954 1.00 55.85	C
ATOM 4813 C PHE C 435	9.604 45.980 78.009 1.00 57.99	C
ATOM 4814 O PHE C 435	8.488 45.463 78.148 1.00 57.42	O
ATOM 4815 CB PHE C 435	10.833 46.587 80.108 1.00 55.50	C
ATOM 4816 CG PHE C 435	11.450 46.066 81.373 1.00 55.59	C
ATOM 4817 CD1 PHE C 435	11.748 44.719 81.548 1.00 55.40	C
ATOM 4818 CD2 PHE C 435	11.735 46.941 82.410 1.00 54.85	C
ATOM 4819 CE1 PHE C 435	12.330 44.252 82.692 1.00 54.88	C
ATOM 4820 CE2 PHE C 435	12.312 46.512 83.573 1.00 54.54	C
ATOM 4821 CZ PHE C 435	12.609 45.163 83.698 1.00 55.69	C

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ATOM 4822 N ARG C 436	9.895 46.864 77.039 1.00 60.12	N
ATOM 4823 CA ARG C 436	8.905 47.250 76.049 1.00 62.03	C
ATOM 4824 C ARG C 436	8.479 46.028 75.247 1.00 63.18	C
ATOM 4825 O ARG C 436	7.300 45.695 75.167 1.00 63.07	O
ATOM 4826 CB ARG C 436	9.489 48.295 75.126 1.00 63.26	C
ATOM 4827 CG ARG C 436	8.479 49.271 74.577 1.00 65.79	C
ATOM 4828 CD ARG C 436	9.088 50.278 73.624 1.00 68.16	C
ATOM 4829 NE ARG C 436	10.145 51.074 74.245 1.00 69.88	N
ATOM 4830 CZ ARG C 436	11.413 51.012 73.842 1.00 71.48	C
ATOM 4831 NH1 ARG C 436	11.753 50.206 72.835 1.00 71.96	N
ATOM 4832 NH2 ARG C 436	12.343 51.753 74.446 1.00 72.39	N
ATOM 4833 N MET C 437	9.441 45.309 74.683 1.00 65.08	N
ATOM 4834 CA MET C 437	9.124 44.123 73.919 1.00 67.98	C
ATOM 4835 C MET C 437	8.298 43.091 74.651 1.00 66.52	C
ATOM 4836 O MET C 437	7.413 42.492 74.051 1.00 67.09	O
ATOM 4837 CB MET C 437	10.394 43.416 73.489 1.00 73.78	C
ATOM 4838 CG MET C 437	11.173 44.154 72.409 1.00 80.32	C
ATOM 4839 SD MET C 437	12.348 43.010 71.647 1.00 87.14	S
ATOM 4840 CE MET C 437	13.497 42.566 72.961 1.00 84.82	C
ATOM 4841 N MET C 438	8.543 42.820 75.917 1.00 65.34	N
ATOM 4842 CA MET C 438	7.802 41.840 76.696 1.00 63.76	C
ATOM 4843 C MET C 438	6.488 42.370 77.246 1.00 62.74	C
ATOM 4844 O MET C 438	5.750 41.629 77.857 1.00 61.15	O
ATOM 4845 CB MET C 438	8.596 41.518 77.955 1.00 63.80	C
ATOM 4846 CG MET C 438	9.993 41.010 77.625 1.00 63.23	C
ATOM 4847 SD MET C 438	10.545 40.126 79.062 1.00 64.41	S
ATOM 4848 CE MET C 438	9.130 39.254 79.688 1.00 64.16	C
ATOM 4849 N ASN C 439	6.313 43.666 77.043 1.00 63.40	N
ATOM 4850 CA ASN C 439	5.120 44.358 77.478 1.00 64.21	C
ATOM 4851 C ASN C 439	4.871 44.060 78.943 1.00 61.46	C
ATOM 4852 O ASN C 439	3.910 43.458 79.363 1.00 60.12	O
ATOM 4853 CB ASN C 439	3.968 43.923 76.576 1.00 69.26	C
ATOM 4854 CG ASN C 439	2.734 44.729 76.957 1.00 74.42	C
ATOM 4855 OD1 ASN C 439	1.595 44.254 76.772 1.00 77.74	O
ATOM 4856 ND2 ASN C 439	2.935 45.937 77.509 1.00 75.66	N
ATOM 4857 N LEU C 440	5.842 44.507 79.721 1.00 59.76	N
ATOM 4858 CA LEU C 440	5.897 44.300 81.147 1.00 58.34	C
ATOM 4859 C LEU C 440	4.799 45.104 81.805 1.00 59.09	C
ATOM 4860 O LEU C 440	4.699 46.294 81.566 1.00 58.96	O
ATOM 4861 CB LEU C 440	7.262 44.697 81.689 1.00 57.06	C
ATOM 4862 CG LEU C 440	7.481 44.715 83.192 1.00 55.81	C
ATOM 4863 CD1 LEU C 440	7.505 43.319 83.760 1.00 55.18	C
ATOM 4864 CD2 LEU C 440	8.759 45.460 83.518 1.00 55.68	C
ATOM 4865 N GLN C 441	4.024 44.404 82.620 1.00 59.85	N
ATOM 4866 CA GLN C 441	2.934 45.032 83.333 1.00 60.62	C

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ATOM	4867	C	GLN C 441	3.379	45.686	84.617	1.00	60.00	C
ATOM	4868	O	GLN C 441	4.368	45.251	85.170	1.00	61.05	O
ATOM	4869	CB	GLN C 441	1.983	43.920	83.748	1.00	63.02	C
ATOM	4870	CG	GLN C 441	1.311	43.221	82.594	1.00	66.39	C
ATOM	4871	CD	GLN C 441	0.784	44.199	81.570	1.00	68.71	C
ATOM	4872	OE1	GLN C 441	-0.225	44.840	81.864	1.00	71.08	O
ATOM	4873	NE2	GLN C 441	1.447	44.310	80.426	1.00	69.56	N
ATOM	4874	N	GLY C 442	2.623	46.631	85.141	1.00	60.01	N
ATOM	4875	CA	GLY C 442	2.979	47.285	86.401	1.00	57.82	C
ATOM	4876	C	GLY C 442	2.938	46.301	87.546	1.00	56.23	C
ATOM	4877	O	GLY C 442	3.773	46.384	88.432	1.00	55.56	O
ATOM	4878	N	GLU C 443	2.024	45.342	87.572	1.00	56.45	N
ATOM	4879	CA	GLU C 443	1.958	44.388	88.679	1.00	57.44	C
ATOM	4880	C	GLU C 443	3.253	43.564	88.662	1.00	55.03	C
ATOM	4881	O	GLU C 443	3.793	43.215	89.709	1.00	54.58	O
ATOM	4882	CB	GLU C 443	0.788	43.422	88.734	1.00	60.73	C
ATOM	4883	CG	GLU C 443	-0.627	43.920	88.621	1.00	65.19	C
ATOM	4884	CD	GLU C 443	-0.852	44.790	87.392	1.00	68.64	C
ATOM	4885	OE1	GLU C 443	-0.429	44.448	86.260	1.00	69.36	O
ATOM	4886	OE2	GLU C 443	-1.459	45.870	87.601	1.00	71.25	O
ATOM	4887	N	GLU C 444	3.711	43.263	87.453	1.00	52.22	N
ATOM	4888	CA	GLU C 444	4.956	42.532	87.278	1.00	49.44	C
ATOM	4889	C	GLU C 444	6.125	43.367	87.782	1.00	47.52	C
ATOM	4890	O	GLU C 444	6.931	42.906	88.592	1.00	47.70	O
ATOM	4891	CB	GLU C 444	5.146	42.200	85.811	1.00	48.97	C
ATOM	4892	CG	GLU C 444	4.202	41.069	85.406	1.00	48.66	C
ATOM	4893	CD	GLU C 444	4.329	40.783	83.920	1.00	48.63	C
ATOM	4894	OE1	GLU C 444	4.480	41.780	83.171	1.00	47.53	O
ATOM	4895	OE2	GLU C 444	4.272	39.573	83.603	1.00	48.73	O
ATOM	4896	N	PHE C 445	6.177	44.609	87.346	1.00	45.52	N
ATOM	4897	CA	PHE C 445	7.214	45.539	87.740	1.00	44.59	C
ATOM	4898	C	PHE C 445	7.390	45.590	89.250	1.00	45.53	C
ATOM	4899	O	PHE C 445	8.467	45.443	89.845	1.00	47.20	O
ATOM	4900	CB	PHE C 445	6.914	46.942	87.235	1.00	42.98	C
ATOM	4901	CG	PHE C 445	7.774	48.008	87.831	1.00	42.70	C
ATOM	4902	CD1	PHE C 445	9.140	47.987	87.636	1.00	43.19	C
ATOM	4903	CD2	PHE C 445	7.246	49.026	88.586	1.00	42.91	C
ATOM	4904	CE1	PHE C 445	9.973	48.953	88.160	1.00	43.72	C
ATOM	4905	CE2	PHE C 445	8.046	50.013	89.135	1.00	43.47	C
ATOM	4906	CZ	PHE C 445	9.412	49.976	88.910	1.00	44.42	C
ATOM	4907	N	VAL C 446	6.306	45.824	89.947	1.00	45.37	N
ATOM	4908	CA	VAL C 446	6.272	45.935	91.405	1.00	45.30	C
ATOM	4909	C	VAL C 446	6.783	44.669	92.044	1.00	46.79	C
ATOM	4910	O	VAL C 446	7.433	44.710	93.103	1.00	47.48	O
ATOM	4911	CB	VAL C 446	4.837	46.404	91.699	1.00	44.57	C

ATOM	4912	CG1 VAL C 446	4.019	45.522	92.584	1.00	43.76	C
ATOM	4913	CG2 VAL C 446	4.889	47.842	92.195	1.00	44.33	C
ATOM	4914	N CYS C 447	6.551	43.489	91.465	1.00	47.28	N
ATOM	4915	CA CYS C 447	7.038	42.253	92.052	1.00	48.53	C
ATOM	4916	C CYS C 447	8.544	42.111	91.882	1.00	49.06	C
ATOM	4917	O CYS C 447	9.269	41.719	92.803	1.00	50.00	O
ATOM	4918	CB CYS C 447	6.383	41.069	91.346	1.00	50.22	C
ATOM	4919	SG CYS C 447	4.718	40.686	91.939	1.00	54.23	S
ATOM	4920	N LEU C 448	9.050	42.393	90.674	1.00	48.14	N
ATOM	4921	CA LEU C 448	10.478	42.283	90.394	1.00	45.53	C
ATOM	4922	C LEU C 448	11.266	43.194	91.312	1.00	44.33	C
ATOM	4923	O LEU C 448	12.270	42.813	91.897	1.00	44.64	O
ATOM	4924	CB LEU C 448	10.747	42.680	88.961	1.00	45.46	C
ATOM	4925	CG LEU C 448	10.340	41.710	87.874	1.00	46.19	C
ATOM	4926	CD1 LEU C 448	10.637	42.390	86.536	1.00	47.62	C
ATOM	4927	CD2 LEU C 448	11.073	40.383	88.007	1.00	46.34	C
ATOM	4928	N LYS C 449	10.776	44.420	91.456	1.00	42.83	N
ATOM	4929	CA LYS C 449	11.442	45.371	92.343	1.00	42.54	C
ATOM	4930	C LYS C 449	11.569	44.810	93.740	1.00	42.45	C
ATOM	4931	O LYS C 449	12.616	44.935	94.366	1.00	42.82	O
ATOM	4932	CB LYS C 449	10.662	46.658	92.231	1.00	43.82	C
ATOM	4933	CG LYS C 449	11.518	47.902	92.420	1.00	44.96	C
ATOM	4934	CD LYS C 449	10.682	48.858	93.233	1.00	45.78	C
ATOM	4935	CE LYS C 449	9.829	49.773	92.376	1.00	45.95	C
ATOM	4936	NZ LYS C 449	9.411	50.863	93.341	1.00	48.01	N
ATOM	4937	N SER C 450	10.585	44.140	94.330	1.00	42.30	N
ATOM	4938	CA SER C 450	10.713	43.531	95.642	1.00	41.90	C
ATOM	4939	C SER C 450	11.654	42.334	95.600	1.00	40.58	C
ATOM	4940	O SER C 450	12.397	42.164	96.538	1.00	41.12	O
ATOM	4941	CB SER C 450	9.389	42.962	96.170	1.00	43.19	C
ATOM	4942	OG SER C 450	8.496	44.055	96.086	1.00	46.06	O
ATOM	4943	N ILE C 451	11.621	41.525	94.557	1.00	39.35	N
ATOM	4944	CA ILE C 451	12.542	40.416	94.435	1.00	38.13	C
ATOM	4945	C ILE C 451	13.950	40.990	94.511	1.00	37.58	C
ATOM	4946	O ILE C 451	14.748	40.431	95.269	1.00	37.68	O
ATOM	4947	CB ILE C 451	12.351	39.683	93.100	1.00	38.57	C
ATOM	4948	CG1 ILE C 451	10.934	39.103	93.141	1.00	38.70	C
ATOM	4949	CG2 ILE C 451	13.459	38.678	92.856	1.00	36.53	C
ATOM	4950	CD1 ILE C 451	10.708	38.069	92.060	1.00	40.52	C
ATOM	4951	N ILE C 452	14.213	42.084	93.786	1.00	36.55	N
ATOM	4952	CA ILE C 452	15.543	42.703	93.834	1.00	36.20	C
ATOM	4953	C ILE C 452	15.917	43.115	95.248	1.00	37.08	C
ATOM	4954	O ILE C 452	16.998	42.826	95.733	1.00	37.44	O
ATOM	4955	CB ILE C 452	15.659	43.928	92.914	1.00	34.94	C
ATOM	4956	CG1 ILE C 452	15.467	43.485	91.464	1.00	35.56	C

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ATOM	4957	CG2 ILE C 452	16.968	44.655	93.112	1.00	34.17	C
ATOM	4958	CD1 ILE C 452	15.721	44.467	90.341	1.00	34.41	C
ATOM	4959	N LEU C 453	15.030	43.783	95.981	1.00	37.93	N
ATOM	4960	CA LEU C 453	15.309	44.201	97.328	1.00	38.20	C
ATOM	4961	C LEU C 453	15.636	42.989	98.190	1.00	40.22	C
ATOM	4962	O LEU C 453	16.522	43.064	99.031	1.00	41.50	O
ATOM	4963	CB LEU C 453	14.114	44.954	97.944	1.00	36.92	C
ATOM	4964	CG LEU C 453	14.236	45.195	99.466	1.00	35.32	C
ATOM	4965	CD1 LEU C 453	15.403	46.124	99.738	1.00	33.69	C
ATOM	4966	CD2 LEU C 453	12.959	45.756	100.051	1.00	34.14	C
ATOM	4967	N LEU C 454	14.922	41.886	98.094	1.00	41.70	N
ATOM	4968	CA LEU C 454	15.147	40.758	98.959	1.00	43.72	C
ATOM	4969	C LEU C 454	16.241	39.797	98.540	1.00	45.76	C
ATOM	4970	O LEU C 454	16.846	39.193	99.451	1.00	46.64	O
ATOM	4971	CB LEU C 454	13.853	39.905	99.059	1.00	43.87	C
ATOM	4972	CG LEU C 454	12.778	40.568	99.923	1.00	44.26	C
ATOM	4973	CD1 LEU C 454	11.412	40.002	99.623	1.00	44.28	C
ATOM	4974	CD2 LEU C 454	13.149	40.345	101.376	1.00	44.75	C
ATOM	4975	N ASN C 455	16.464	39.630	97.230	1.00	45.86	N
ATOM	4976	CA ASN C 455	17.450	38.623	96.855	1.00	45.74	C
ATOM	4977	C ASN C 455	18.826	39.149	96.709	1.00	48.12	C
ATOM	4978	O ASN C 455	19.726	38.337	96.800	1.00	50.93	O
ATOM	4979	CB ASN C 455	17.014	37.961	95.565	1.00	44.52	C
ATOM	4980	CG ASN C 455	17.979	37.092	94.818	1.00	44.19	C
ATOM	4981	OD1 ASN C 455	18.469	37.593	93.781	1.00	45.37	O
ATOM	4982	ND2 ASN C 455	18.250	35.885	95.291	1.00	42.07	N
ATOM	4983	N SER C 456	19.064	40.403	96.473	1.00	51.80	N
ATOM	4984	CA SER C 456	20.440	40.851	96.248	1.00	54.85	C
ATOM	4985	C SER C 456	21.376	40.638	97.405	1.00	57.64	C
ATOM	4986	O SER C 456	22.481	40.080	97.277	1.00	59.30	O
ATOM	4987	CB SER C 456	20.435	42.295	95.736	1.00	54.12	C
ATOM	4988	OG SER C 456	20.138	42.329	94.360	1.00	52.76	O
ATOM	4989	N GLY C 457	21.046	41.060	98.609	1.00	60.33	N
ATOM	4990	CA GLY C 457	21.983	40.904	99.716	1.00	63.48	C
ATOM	4991	C GLY C 457	21.824	39.630	100.506	1.00	65.50	C
ATOM	4992	O GLY C 457	22.471	39.536	101.553	1.00	65.18	O
ATOM	4993	N VAL C 458	21.007	38.692	100.047	1.00	68.21	N
ATOM	4994	CA VAL C 458	20.775	37.473	100.799	1.00	71.05	C
ATOM	4995	C VAL C 458	21.980	36.607	101.035	1.00	75.07	C
ATOM	4996	O VAL C 458	22.054	36.091	102.167	1.00	76.32	O
ATOM	4997	CB VAL C 458	19.575	36.686	100.270	1.00	69.84	C
ATOM	4998	CG1 VAL C 458	19.811	35.979	98.973	1.00	68.69	C
ATOM	4999	CG2 VAL C 458	19.138	35.706	101.359	1.00	69.73	C
ATOM	5000	N TYR C 459	22.958	36.441	100.166	1.00	79.58	N
ATOM	5001	CA TYR C 459	24.146	35.635	100.364	1.00	83.85	C

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ATOM 5002 C TYR C 459	25.224 36.366 101.129 1.00 86.14	C
ATOM 5003 O TYR C 459	26.383 35.952 101.068 1.00 87.66	O
ATOM 5004 CB TYR C 459	24.818 35.195 99.022 1.00 85.85	C
ATOM 5005 CG TYR C 459	23.736 34.491 98.235 1.00 88.50	C
ATOM 5006 CD1 TYR C 459	22.830 35.301 97.561 1.00 89.49	C
ATOM 5007 CD2 TYR C 459	23.534 33.123 98.179 1.00 89.54	C
ATOM 5008 CE1 TYR C 459	21.809 34.664 96.927 1.00 90.75	C
ATOM 5009 CE2 TYR C 459	22.477 32.559 97.471 1.00 90.82	C
ATOM 5010 CZ TYR C 459	21.582 33.346 96.790 1.00 91.29	C
ATOM 5011 OH TYR C 459	20.497 32.907 96.064 1.00 91.89	O
ATOM 5012 N THR C 460	24.909 37.448 101.812 1.00 88.68	N
ATOM 5013 CA THR C 460	25.894 38.231 102.538 1.00 91.09	C
ATOM 5014 C THR C 460	25.316 38.723 103.849 1.00 92.44	C
ATOM 5015 O THR C 460	25.498 39.884 104.204 1.00 93.67	O
ATOM 5016 CB THR C 460	26.361 39.420 101.681 1.00 91.40	C
ATOM 5017 OG1 THR C 460	25.703 39.507 100.413 1.00 91.84	O
ATOM 5018 CG2 THR C 460	27.842 39.228 101.373 1.00 92.41	C
ATOM 5019 N PHE C 461	24.626 37.847 104.571 1.00 94.00	N
ATOM 5020 CA PHE C 461	24.018 38.287 105.816 1.00 95.54	C
ATOM 5021 C PHE C 461	24.888 38.648 107.003 1.00 96.77	C
ATOM 5022 O PHE C 461	24.579 39.656 107.697 1.00 97.39	O
ATOM 5023 CB PHE C 461	22.859 37.323 106.179 1.00 95.11	C
ATOM 5024 CG PHE C 461	21.571 38.019 105.769 1.00 94.25	C
ATOM 5025 CD1 PHE C 461	21.517 39.404 105.732 1.00 93.75	C
ATOM 5026 CD2 PHE C 461	20.450 37.306 105.421 1.00 94.01	C
ATOM 5027 CE1 PHE C 461	20.379 40.066 105.358 1.00 93.81	C
ATOM 5028 CE2 PHE C 461	19.305 37.974 105.053 1.00 93.96	C
ATOM 5029 CZ PHE C 461	19.254 39.353 105.016 1.00 93.71	C
ATOM 5030 N THR C 465	24.670 33.892 112.917 1.00128.06	N
ATOM 5031 CA THR C 465	24.660 32.726 112.031 1.00128.12	C
ATOM 5032 C THR C 465	23.327 31.991 112.106 1.00127.34	C
ATOM 5033 O THR C 465	22.545 32.033 111.139 1.00128.11	O
ATOM 5034 CB THR C 465	25.798 31.732 112.320 1.00128.79	C
ATOM 5035 OG1 THR C 465	25.434 30.413 111.883 1.00129.06	O
ATOM 5036 CG2 THR C 465	26.164 31.714 113.795 1.00129.25	C
ATOM 5037 N LEU C 466	22.990 31.349 113.227 1.00125.02	N
ATOM 5038 CA LEU C 466	21.700 30.665 113.350 1.00122.24	C
ATOM 5039 C LEU C 466	20.539 31.629 113.107 1.00120.10	C
ATOM 5040 O LEU C 466	19.510 31.214 112.557 1.00120.29	O
ATOM 5041 CB LEU C 466	21.572 29.987 114.713 1.00122.49	C
ATOM 5045 N LYS C 467	20.684 32.909 113.481 1.00116.70	N
ATOM 5046 CA LYS C 467	19.670 33.922 113.224 1.00112.91	C
ATOM 5047 C LYS C 467	19.721 34.200 111.720 1.00108.82	C
ATOM 5048 O LYS C 467	18.695 34.460 111.109 1.00108.56	O
ATOM 5049 CB LYS C 467	19.858 35.224 113.989 1.00114.52	C

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ATOM	5050	CG	LYS	C 467	18.591	36.061	114.190	1.00115.87	C
ATOM	5051	CD	LYS	C 467	18.944	37.459	114.677	1.00117.42	C
ATOM	5052	CE	LYS	C 467	18.789	37.702	116.175	1.00118.05	C
ATOM	5053	NZ	LYS	C 467	19.336	39.016	116.623	1.00117.84	N
ATOM	5054	N	SER	C 468	20.905	34.112	111.126	1.00103.95	N
ATOM	5055	CA	SER	C 468	21.085	34.318	109.705	1.00 99.66	C
ATOM	5056	C	SER	C 468	20.423	33.205	108.904	1.00 96.07	C
ATOM	5057	O	SER	C 468	19.823	33.423	107.862	1.00 95.24	O
ATOM	5058	CB	SER	C 468	22.564	34.322	109.314	1.00100.26	C
ATOM	5059	OG	SER	C 468	23.212	35.441	109.875	1.00101.24	O
ATOM	5060	N	LEU	C 469	20.559	31.991	109.430	1.00 92.38	N
ATOM	5061	CA	LEU	C 469	19.967	30.829	108.764	1.00 89.30	C
ATOM	5062	C	LEU	C 469	18.461	31.023	108.773	1.00 86.71	C
ATOM	5063	O	LEU	C 469	17.766	30.720	107.816	1.00 86.34	O
ATOM	5064	CB	LEU	C 469	20.473	29.539	109.400	1.00 89.33	C
ATOM	5068	N	GLU	C 470	17.928	31.563	109.850	1.00 84.83	N
ATOM	5069	CA	GLU	C 470	16.495	31.823	109.972	1.00 83.61	C
ATOM	5070	C	GLU	C 470	16.134	33.035	109.132	1.00 79.55	C
ATOM	5071	O	GLU	C 470	15.088	33.047	108.489	1.00 78.82	O
ATOM	5072	CB	GLU	C 470	16.139	31.901	111.440	1.00 87.71	C
ATOM	5073	CG	GLU	C 470	15.292	33.077	111.873	1.00 93.24	C
ATOM	5074	CD	GLU	C 470	15.355	33.290	113.380	1.00 96.76	C
ATOM	5075	OE1	GLU	C 470	16.284	32.733	114.028	1.00 98.22	O
ATOM	5076	OE2	GLU	C 470	14.467	34.022	113.897	1.00 98.81	O
ATOM	5077	N	GLU	C 471	16.978	34.054	109.076	1.00 75.35	N
ATOM	5078	CA	GLU	C 471	16.770	35.226	108.239	1.00 71.42	C
ATOM	5079	C	GLU	C 471	16.811	34.789	106.767	1.00 70.18	C
ATOM	5080	O	GLU	C 471	16.028	35.203	105.917	1.00 70.00	O
ATOM	5081	CB	GLU	C 471	17.840	36.278	108.472	1.00 70.12	C
ATOM	5082	CG	GLU	C 471	17.934	36.974	109.788	1.00 68.28	C
ATOM	5083	CD	GLU	C 471	17.259	38.305	109.857	1.00 68.11	C
ATOM	5084	OE1	GLU	C 471	17.694	39.296	109.273	1.00 67.82	O
ATOM	5085	OE2	GLU	C 471	16.213	38.451	110.514	1.00 69.38	O
ATOM	5086	N	LYS	C 472	17.741	33.908	106.395	1.00 68.96	N
ATOM	5087	CA	LYS	C 472	17.819	33.410	105.031	1.00 67.47	C
ATOM	5088	C	LYS	C 472	16.551	32.648	104.691	1.00 65.12	C
ATOM	5089	O	LYS	C 472	16.002	32.905	103.630	1.00 64.82	O
ATOM	5090	CB	LYS	C 472	19.051	32.561	104.737	1.00 68.76	C
ATOM	5091	CG	LYS	C 472	20.339	33.368	104.695	1.00 70.99	C
ATOM	5092	CD	LYS	C 472	21.463	32.567	104.073	1.00 73.75	C
ATOM	5093	CE	LYS	C 472	22.800	32.870	104.736	1.00 76.56	C
ATOM	5094	NZ	LYS	C 472	23.538	34.011	104.094	1.00 78.24	N
ATOM	5095	N	ASP	C 473	16.052	31.768	105.540	1.00 64.20	N
ATOM	5096	CA	ASP	C 473	14.833	31.037	105.206	1.00 64.30	C
ATOM	5097	C	ASP	C 473	13.659	31.962	104.961	1.00 61.70	C

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ATOM 5098 O ASP C 473	12.955 31.911 103.979 1.00 62.02	O
ATOM 5099 CB ASP C 473	14.372 30.106 106.312 1.00 67.91	C
ATOM 5100 CG ASP C 473	15.401 29.027 106.539 1.00 72.02	C
ATOM 5101 OD1 ASP C 473	16.408 28.902 105.808 1.00 73.98	O
ATOM 5102 OD2 ASP C 473	15.161 28.276 107.506 1.00 74.98	O
ATOM 5103 N HIS C 474	13.448 32.846 105.924 1.00 58.75	N
ATOM 5104 CA HIS C 474	12.396 33.829 105.832 1.00 55.18	C
ATOM 5105 C HIS C 474	12.442 34.457 104.446 1.00 53.42	C
ATOM 5106 O HIS C 474	11.475 34.408 103.695 1.00 51.88	O
ATOM 5107 CB HIS C 474	12.594 34.866 106.945 1.00 54.45	C
ATOM 5108 CG HIS C 474	11.424 35.812 106.840 1.00 54.79	C
ATOM 5109 ND1 HIS C 474	10.116 35.348 106.955 1.00 54.12	N
ATOM 5110 CD2 HIS C 474	11.387 37.140 106.595 1.00 54.99	C
ATOM 5111 CE1 HIS C 474	9.328 36.389 106.806 1.00 54.87	C
ATOM 5112 NE2 HIS C 474	10.058 37.484 106.587 1.00 55.22	N
ATOM 5113 N ILE C 475	13.590 35.031 104.091 1.00 52.67	N
ATOM 5114 CA ILE C 475	13.735 35.634 102.781 1.00 52.95	C
ATOM 5115 C ILE C 475	13.418 34.660 101.657 1.00 53.00	C
ATOM 5116 O ILE C 475	12.636 35.017 100.776 1.00 51.77	O
ATOM 5117 CB ILE C 475	15.136 36.201 102.580 1.00 53.12	C
ATOM 5118 CG1 ILE C 475	15.274 37.406 103.515 1.00 53.19	C
ATOM 5119 CG2 ILE C 475	15.319 36.610 101.123 1.00 53.66	C
ATOM 5120 CD1 ILE C 475	16.631 38.056 103.323 1.00 53.37	C
ATOM 5121 N HIS C 476	13.963 33.450 101.683 1.00 54.05	N
ATOM 5122 CA HIS C 476	13.640 32.494 100.631 1.00 56.04	C
ATOM 5123 C HIS C 476	12.147 32.256 100.561 1.00 57.15	C
ATOM 5124 O HIS C 476	11.544 32.199 99.490 1.00 57.97	O
ATOM 5125 CB HIS C 476	14.423 31.215 100.809 1.00 58.57	C
ATOM 5126 CG HIS C 476	15.879 31.371 100.464 1.00 61.57	C
ATOM 5127 ND1 HIS C 476	16.270 32.030 99.311 1.00 63.01	N
ATOM 5128 CD2 HIS C 476	17.014 30.977 101.094 1.00 61.79	C
ATOM 5129 CE1 HIS C 476	17.595 32.044 99.249 1.00 63.33	C
ATOM 5130 NE2 HIS C 476	18.060 31.410 100.313 1.00 62.82	N
ATOM 5131 N ARG C 477	11.469 32.136 101.686 1.00 58.13	N
ATOM 5132 CA ARG C 477	10.055 31.925 101.813 1.00 58.24	C
ATOM 5133 C ARG C 477	9.208 33.004 101.172 1.00 56.15	C
ATOM 5134 O ARG C 477	8.267 32.705 100.457 1.00 56.37	O
ATOM 5135 CB ARG C 477	9.686 31.955 103.298 1.00 63.15	C
ATOM 5136 CG ARG C 477	8.664 30.872 103.622 1.00 69.39	C
ATOM 5137 CD ARG C 477	9.471 29.553 103.756 1.00 74.54	C
ATOM 5138 NE ARG C 477	10.286 29.698 104.970 1.00 79.66	N
ATOM 5139 CZ ARG C 477	9.748 29.622 106.199 1.00 82.63	C
ATOM 5140 NH1 ARG C 477	8.440 29.382 106.338 1.00 84.12	N
ATOM 5141 NH2 ARG C 477	10.528 29.778 107.270 1.00 83.49	N
ATOM 5142 N VAL C 478	9.501 34.261 101.451 1.00 53.78	N

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ATOM	5143	CA	VAL C 478	8.785	35.397	100.877	1.00	50.99	C
ATOM	5144	C	VAL C 478	9.051	35.410	99.387	1.00	49.83	C
ATOM	5145	O	VAL C 478	8.164	35.608	98.569	1.00	49.34	O
ATOM	5146	CB	VAL C 478	9.272	36.682	101.553	1.00	51.01	C
ATOM	5147	CG1	VAL C 478	8.626	37.917	100.977	1.00	51.00	C
ATOM	5148	CG2	VAL C 478	8.998	36.543	103.040	1.00	50.78	C
ATOM	5149	N	LEU C 479	10.293	35.118	98.989	1.00	49.33	N
ATOM	5150	CA	LEU C 479	10.667	35.040	97.577	1.00	48.40	C
ATOM	5151	C	LEU C 479	9.793	34.022	96.824	1.00	49.73	C
ATOM	5152	O	LEU C 479	9.423	34.242	95.655	1.00	49.19	O
ATOM	5153	CB	LEU C 479	12.142	34.732	97.409	1.00	44.59	C
ATOM	5154	CG	LEU C 479	13.058	35.946	97.486	1.00	42.74	C
ATOM	5155	CD1	LEU C 479	14.506	35.505	97.582	1.00	42.36	C
ATOM	5156	CD2	LEU C 479	12.832	36.885	96.327	1.00	41.90	C
ATOM	5157	N	ASP C 480	9.427	32.915	97.493	1.00	50.12	N
ATOM	5158	CA	ASP C 480	8.558	31.937	96.863	1.00	50.18	C
ATOM	5159	C	ASP C 480	7.175	32.546	96.740	1.00	51.14	C
ATOM	5160	O	ASP C 480	6.523	32.390	95.717	1.00	51.29	O
ATOM	5161	CB	ASP C 480	8.488	30.649	97.631	1.00	50.11	C
ATOM	5162	CG	ASP C 480	9.741	29.825	97.574	1.00	51.36	C
ATOM	5163	OD1	ASP C 480	10.591	29.903	96.676	1.00	52.08	O
ATOM	5164	OD2	ASP C 480	9.927	29.000	98.488	1.00	52.79	O
ATOM	5165	N	LYS C 481	6.743	33.265	97.776	1.00	53.56	N
ATOM	5166	CA	LYS C 481	5.417	33.889	97.776	1.00	54.84	C
ATOM	5167	C	LYS C 481	5.340	34.861	96.607	1.00	53.95	C
ATOM	5168	O	LYS C 481	4.398	34.790	95.807	1.00	53.74	O
ATOM	5169	CB	LYS C 481	5.094	34.576	99.094	1.00	57.80	C
ATOM	5170	CG	LYS C 481	3.623	34.949	99.230	1.00	63.05	C
ATOM	5171	CD	LYS C 481	2.826	33.854	99.962	1.00	66.61	C
ATOM	5172	CE	LYS C 481	1.357	33.824	99.573	1.00	68.92	C
ATOM	5173	NZ	LYS C 481	1.120	34.517	98.248	1.00	71.39	N
ATOM	5174	N	ILE C 482	6.369	35.720	96.476	1.00	51.83	N
ATOM	5175	CA	ILE C 482	6.371	36.660	95.352	1.00	49.12	C
ATOM	5176	C	ILE C 482	6.411	35.887	94.050	1.00	48.12	C
ATOM	5177	O	ILE C 482	5.783	36.297	93.085	1.00	47.95	O
ATOM	5178	CB	ILE C 482	7.460	37.713	95.455	1.00	48.89	C
ATOM	5179	CG1	ILE C 482	7.192	38.602	96.668	1.00	49.17	C
ATOM	5180	CG2	ILE C 482	7.483	38.626	94.244	1.00	49.02	C
ATOM	5181	CD1	ILE C 482	8.459	38.975	97.400	1.00	50.45	C
ATOM	5182	N	THR C 483	7.081	34.753	93.952	1.00	47.76	N
ATOM	5183	CA	THR C 483	7.059	33.968	92.728	1.00	48.27	C
ATOM	5184	C	THR C 483	5.643	33.514	92.425	1.00	49.14	C
ATOM	5185	O	THR C 483	5.186	33.642	91.291	1.00	49.74	O
ATOM	5186	CB	THR C 483	7.929	32.703	92.839	1.00	48.14	C
ATOM	5187	OG1	THR C 483	9.270	33.189	92.970	1.00	49.16	O

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ATOM	5188	CG2 THR C 483	7.772	31.830	91.625	1.00	47.31	C
ATOM	5189	N ASP C 484	4.946	32.989	93.446	1.00	49.27	N
ATOM	5190	CA ASP C 484	3.557	32.562	93.251	1.00	48.63	C
ATOM	5191	C ASP C 484	2.691	33.722	92.790	1.00	48.18	C
ATOM	5192	O ASP C 484	1.876	33.608	91.893	1.00	48.21	O
ATOM	5193	CB ASP C 484	2.985	31.988	94.520	1.00	49.64	C
ATOM	5194	CG ASP C 484	3.626	30.688	94.932	1.00	51.32	C
ATOM	5195	OD1 ASP C 484	4.320	30.043	94.113	1.00	51.62	O
ATOM	5196	OD2 ASP C 484	3.421	30.296	96.107	1.00	52.63	O
ATOM	5197	N THR C 485	2.869	34.912	93.360	1.00	48.09	N
ATOM	5198	CA THR C 485	2.119	36.086	92.938	1.00	47.03	C
ATOM	5199	C THR C 485	2.339	36.321	91.465	1.00	47.25	C
ATOM	5200	O THR C 485	1.385	36.554	90.749	1.00	47.41	O
ATOM	5201	CB THR C 485	2.596	37.283	93.776	1.00	46.36	C
ATOM	5202	OG1 THR C 485	2.473	36.870	95.137	1.00	45.09	O
ATOM	5203	CG2 THR C 485	1.807	38.518	93.441	1.00	45.66	C
ATOM	5204	N LEU C 486	3.584	36.243	91.012	1.00	48.22	N
ATOM	5205	CA LEU C 486	3.918	36.449	89.612	1.00	49.46	C
ATOM	5206	C LEU C 486	3.143	35.517	88.684	1.00	50.60	C
ATOM	5207	O LEU C 486	2.431	35.935	87.777	1.00	50.21	O
ATOM	5208	CB LEU C 486	5.414	36.296	89.333	1.00	47.37	C
ATOM	5209	CG LEU C 486	6.186	37.623	89.347	1.00	46.66	C
ATOM	5210	CD1 LEU C 486	7.661	37.332	89.171	1.00	45.32	C
ATOM	5211	CD2 LEU C 486	5.628	38.632	88.358	1.00	45.13	C
ATOM	5212	N ILE C 487	3.266	34.223	88.942	1.00	52.22	N
ATOM	5213	CA ILE C 487	2.545	33.226	88.170	1.00	53.78	C
ATOM	5214	C ILE C 487	1.043	33.494	88.230	1.00	55.38	C
ATOM	5215	O ILE C 487	0.353	33.426	87.225	1.00	55.65	O
ATOM	5216	CB ILE C 487	2.793	31.826	88.740	1.00	53.61	C
ATOM	5217	CG1 ILE C 487	4.243	31.431	88.572	1.00	54.10	C
ATOM	5218	CG2 ILE C 487	1.831	30.880	88.043	1.00	54.55	C
ATOM	5219	CD1 ILE C 487	4.670	30.922	87.218	1.00	53.75	C
ATOM	5220	N HIS C 488	0.521	33.786	89.415	1.00	57.45	N
ATOM	5221	CA HIS C 488	-0.879	34.089	89.597	1.00	59.38	C
ATOM	5222	C HIS C 488	-1.279	35.176	88.603	1.00	58.99	C
ATOM	5223	O HIS C 488	-2.211	35.056	87.824	1.00	58.98	O
ATOM	5224	CB HIS C 488	-1.135	34.613	91.003	1.00	62.70	C
ATOM	5225	CG HIS C 488	-2.519	35.168	91.161	1.00	65.66	C
ATOM	5226	ND1 HIS C 488	-3.649	34.383	91.099	1.00	66.87	N
ATOM	5227	CD2 HIS C 488	-2.948	36.439	91.363	1.00	67.13	C
ATOM	5228	CE1 HIS C 488	-4.717	35.147	91.272	1.00	67.63	C
ATOM	5229	NE2 HIS C 488	-4.326	36.404	91.434	1.00	67.86	N
ATOM	5230	N LEU C 489	-0.544	36.277	88.622	1.00	58.57	N
ATOM	5231	CA LEU C 489	-0.821	37.358	87.698	1.00	58.38	C
ATOM	5232	C LEU C 489	-0.908	36.854	86.262	1.00	58.89	C

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ATOM 5233	O LEU C 489	-1.829	37.140	85.507	1.00	59.10	O
ATOM 5234	CB LEU C 489	0.330	38.360	87.856	1.00	57.52	C
ATOM 5235	CG LEU C 489	0.232	39.286	89.043	1.00	57.24	C
ATOM 5236	CD1 LEU C 489	1.542	40.042	89.206	1.00	58.98	C
ATOM 5237	CD2 LEU C 489	-0.894	40.271	88.863	1.00	57.71	C
ATOM 5238	N MET C 490	0.073	36.111	85.788	1.00	59.42	N
ATOM 5239	CA MET C 490	0.185	35.601	84.450	1.00	60.66	C
ATOM 5240	C MET C 490	-0.958	34.696	84.016	1.00	62.10	C
ATOM 5241	O MET C 490	-1.461	34.765	82.892	1.00	62.62	O
ATOM 5242	CB MET C 490	1.490	34.790	84.308	1.00	60.35	C
ATOM 5243	CG MET C 490	2.660	35.639	83.837	1.00	60.29	C
ATOM 5244	SD MET C 490	4.194	34.770	84.219	1.00	59.65	S
ATOM 5245	CE MET C 490	5.182	36.198	84.659	1.00	61.18	C
ATOM 5246	N ALA C 491	-1.349	33.800	84.920	1.00	62.86	N
ATOM 5247	CA ALA C 491	-2.451	32.878	84.664	1.00	62.45	C
ATOM 5248	C ALA C 491	-3.679	33.758	84.502	1.00	63.52	C
ATOM 5249	O ALA C 491	-4.366	33.675	83.486	1.00	64.88	O
ATOM 5250	CB ALA C 491	-2.617	31.907	85.793	1.00	61.59	C
ATOM 5251	N LYS C 492	-3.908	34.692	85.425	1.00	64.00	N
ATOM 5252	CA LYS C 492	-5.043	35.601	85.271	1.00	64.78	C
ATOM 5253	C LYS C 492	-4.943	36.276	83.916	1.00	65.16	C
ATOM 5254	O LYS C 492	-6.015	36.472	83.331	1.00	66.45	O
ATOM 5255	CB LYS C 492	-5.233	36.553	86.452	1.00	64.96	C
ATOM 5260	N ALA C 493	-3.815	36.572	83.285	1.00	65.48	N
ATOM 5261	CA ALA C 493	-3.817	37.174	81.956	1.00	66.34	C
ATOM 5262	C ALA C 493	-4.062	36.093	80.910	1.00	66.80	C
ATOM 5263	O ALA C 493	-4.037	36.333	79.709	1.00	67.95	O
ATOM 5264	CB ALA C 493	-2.549	37.946	81.657	1.00	66.14	C
ATOM 5265	N GLY C 494	-4.306	34.871	81.318	1.00	66.55	N
ATOM 5266	CA GLY C 494	-4.549	33.743	80.477	1.00	67.39	C
ATOM 5267	C GLY C 494	-3.327	33.340	79.682	1.00	69.03	C
ATOM 5268	O GLY C 494	-3.431	33.325	78.457	1.00	70.85	O
ATOM 5269	N LEU C 495	-2.156	33.035	80.240	1.00	69.12	N
ATOM 5270	CA LEU C 495	-1.042	32.605	79.401	1.00	67.66	C
ATOM 5271	C LEU C 495	-1.025	31.096	79.628	1.00	66.93	C
ATOM 5272	O LEU C 495	-1.353	30.693	80.728	1.00	66.27	O
ATOM 5273	CB LEU C 495	0.326	33.123	79.765	1.00	67.67	C
ATOM 5274	CG LEU C 495	0.544	34.591	80.047	1.00	67.94	C
ATOM 5275	CD1 LEU C 495	2.030	34.891	80.136	1.00	67.69	C
ATOM 5276	CD2 LEU C 495	-0.128	35.456	78.998	1.00	69.10	C
ATOM 5277	N THR C 496	-0.644	30.323	78.648	1.00	67.85	N
ATOM 5278	CA THR C 496	-0.589	28.879	78.877	1.00	69.07	C
ATOM 5279	C THR C 496	0.282	28.596	80.074	1.00	69.69	C
ATOM 5280	O THR C 496	1.085	29.427	80.485	1.00	71.00	O
ATOM 5281	CB THR C 496	0.131	28.249	77.679	1.00	69.65	C

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ATOM 5282	OG1 THR C 496	-0.649 28.629 76.549 1.00 70.83	O
ATOM 5283	CG2 THR C 496	0.241 26.748 77.746 1.00 71.54	C
ATOM 5284	N LEU C 497	0.243 27.387 80.603 1.00 70.09	N
ATOM 5285	CA LEU C 497	1.104 26.974 81.695 1.00 70.17	C
ATOM 5286	C LEU C 497	2.554 27.015 81.241 1.00 70.38	C
ATOM 5287	O LEU C 497	3.468 27.257 82.022 1.00 70.44	O
ATOM 5288	CB LEU C 497	0.734 25.569 82.077 1.00 71.33	C
ATOM 5289	CG LEU C 497	0.560 25.185 83.533 1.00 72.65	C
ATOM 5290	CD1 LEU C 497	1.474 23.971 83.684 1.00 73.62	C
ATOM 5291	CD2 LEU C 497	0.900 26.296 84.517 1.00 73.68	C
ATOM 5292	N GLN C 498	2.790 26.779 79.954 1.00 71.07	N
ATOM 5293	CA GLN C 498	4.125 26.835 79.385 1.00 71.08	C
ATOM 5294	C GLN C 498	4.522 28.281 79.136 1.00 69.80	C
ATOM 5295	O GLN C 498	5.688 28.601 79.316 1.00 70.90	O
ATOM 5296	CB GLN C 498	4.285 26.031 78.110 1.00 72.84	C
ATOM 5297	CG GLN C 498	5.423 26.529 77.246 1.00 76.47	C
ATOM 5298	CD GLN C 498	5.789 25.674 76.064 1.00 78.75	C
ATOM 5299	OE1 GLN C 498	6.954 25.383 75.787 1.00 79.93	O
ATOM 5300	NE2 GLN C 498	4.808 25.224 75.292 1.00 80.37	N
ATOM 5301	N GLN C 499	3.637 29.190 78.769 1.00 68.09	N
ATOM 5302	CA GLN C 499	4.045 30.579 78.566 1.00 66.52	C
ATOM 5303	C GLN C 499	4.335 31.222 79.916 1.00 65.14	C
ATOM 5304	O GLN C 499	5.128 32.156 80.000 1.00 65.15	O
ATOM 5305	CB GLN C 499	2.954 31.403 77.908 1.00 67.39	C
ATOM 5306	CG GLN C 499	2.187 30.566 76.902 1.00 68.26	C
ATOM 5307	CD GLN C 499	1.351 31.474 76.031 1.00 69.04	C
ATOM 5308	OE1 GLN C 499	0.360 32.015 76.504 1.00 69.68	O
ATOM 5309	NE2 GLN C 499	1.831 31.578 74.804 1.00 69.76	N
ATOM 5310	N GLN C 500	3.651 30.693 80.931 1.00 62.78	N
ATOM 5311	CA GLN C 500	3.837 31.173 82.288 1.00 60.68	C
ATOM 5312	C GLN C 500	5.280 30.888 82.701 1.00 58.45	C
ATOM 5313	O GLN C 500	6.001 31.837 83.021 1.00 58.31	O
ATOM 5314	CB GLN C 500	2.885 30.508 83.254 1.00 61.20	C
ATOM 5315	CG GLN C 500	1.505 31.146 83.337 1.00 62.27	C
ATOM 5316	CD GLN C 500	0.578 30.080 83.904 1.00 63.04	C
ATOM 5317	OE1 GLN C 500	0.821 29.501 84.963 1.00 63.59	O
ATOM 5318	NE2 GLN C 500	-0.480 29.815 83.175 1.00 63.65	N
ATOM 5319	N HIS C 501	5.709 29.635 82.623 1.00 55.31	N
ATOM 5320	CA HIS C 501	7.082 29.352 83.006 1.00 53.62	C
ATOM 5321	C HIS C 501	8.090 30.065 82.126 1.00 53.32	C
ATOM 5322	O HIS C 501	9.177 30.418 82.628 1.00 54.43	O
ATOM 5323	CB HIS C 501	7.384 27.886 83.164 1.00 53.44	C
ATOM 5324	CG AHIS C 501	7.433 26.979 81.994 0.50 52.73	C
ATOM 5325	CG BHIS C 501	6.349 27.013 83.805 0.50 53.70	C
ATOM 5326	ND1AHIS C 501	6.855 25.722 82.044 0.50 52.67	N

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ATOM	5327	ND1BHIS C 501	5.801	27.288	85.042	0.50	53.76	N
ATOM	5328	CD2AHIS C 501	7.979	27.093	80.769	0.50	52.11	C
ATOM	5329	CD2BHIS C 501	5.755	25.867	83.389	0.50	53.26	C
ATOM	5330	CE1AHIS C 501	7.049	25.120	80.888	0.50	52.43	C
ATOM	5331	CE1BHIS C 501	4.918	26.362	85.362	0.50	53.63	C
ATOM	5332	NE2AHIS C 501	7.728	25.933	80.098	0.50	51.72	N
ATOM	5333	NE2BHIS C 501	4.873	25.490	84.370	0.50	53.52	N
ATOM	5334	N GLN C 502	7.825	30.313	80.857	1.00	52.12	N
ATOM	5335	CA GLN C 502	8.795	30.998	80.004	1.00	51.05	C
ATOM	5336	C GLN C 502	8.910	32.446	80.416	1.00	50.52	C
ATOM	5337	O GLN C 502	10.011	32.937	80.625	1.00	50.37	O
ATOM	5338	CB GLN C 502	8.419	30.819	78.549	1.00	51.77	C
ATOM	5339	CG GLN C 502	8.355	29.343	78.191	1.00	53.09	C
ATOM	5340	CD GLN C 502	8.334	29.057	76.712	1.00	54.32	C
ATOM	5341	OE1 GLN C 502	7.838	29.832	75.883	1.00	55.59	O
ATOM	5342	NE2 GLN C 502	8.890	27.908	76.359	1.00	54.22	N
ATOM	5343	N ARG C 503	7.806	33.155	80.606	1.00	49.80	N
ATOM	5344	CA ARG C 503	7.817	34.547	81.038	1.00	47.91	C
ATOM	5345	C ARG C 503	8.528	34.719	82.377	1.00	47.46	C
ATOM	5346	O ARG C 503	9.295	35.662	82.567	1.00	48.42	O
ATOM	5347	CB ARG C 503	6.383	35.084	81.223	1.00	46.12	C
ATOM	5348	CG ARG C 503	6.381	36.600	81.233	1.00	44.62	C
ATOM	5349	CD ARG C 503	5.022	37.180	80.960	1.00	43.22	C
ATOM	5350	NE ARG C 503	4.984	38.586	81.332	1.00	43.34	N
ATOM	5351	CZ ARG C 503	5.213	39.567	80.464	1.00	44.08	C
ATOM	5352	NH1 ARG C 503	5.501	39.260	79.208	1.00	44.47	N
ATOM	5353	NH2 ARG C 503	5.163	40.841	80.833	1.00	44.22	N
ATOM	5354	N LEU C 504	8.257	33.827	83.328	1.00	45.70	N
ATOM	5355	CA LEU C 504	8.900	33.891	84.622	1.00	43.64	C
ATOM	5356	C LEU C 504	10.397	33.917	84.370	1.00	43.94	C
ATOM	5357	O LEU C 504	11.077	34.840	84.774	1.00	44.75	O
ATOM	5358	CB LEU C 504	8.611	32.671	85.482	1.00	42.59	C
ATOM	5359	CG LEU C 504	9.080	32.746	86.935	1.00	41.65	C
ATOM	5360	CD1 LEU C 504	8.540	33.943	87.682	1.00	40.32	C
ATOM	5361	CD2 LEU C 504	8.676	31.460	87.632	1.00	41.98	C
ATOM	5362	N ALA C 505	10.894	32.892	83.686	1.00	44.24	N
ATOM	5363	CA ALA C 505	12.328	32.830	83.386	1.00	43.48	C
ATOM	5364	C ALA C 505	12.743	34.069	82.627	1.00	44.17	C
ATOM	5365	O ALA C 505	13.715	34.727	83.005	1.00	45.87	O
ATOM	5366	CB ALA C 505	12.613	31.526	82.691	1.00	42.50	C
ATOM	5367	N GLN C 506	12.065	34.547	81.600	1.00	44.99	N
ATOM	5368	CA GLN C 506	12.497	35.758	80.920	1.00	46.00	C
ATOM	5369	C GLN C 506	12.558	36.913	81.904	1.00	46.79	C
ATOM	5370	O GLN C 506	13.528	37.674	81.821	1.00	48.14	O
ATOM	5371	CB GLN C 506	11.687	36.168	79.697	1.00	46.89	C

ATOM	5372	CG AGLN C 506	10.997	35.027	79.008	0.50	49.22	C
ATOM	5373	CG BGLN C 506	11.982	35.439	78.402	0.50	47.09	C
ATOM	5374	CD AGLN C 506	10.287	35.261	77.712	0.50	50.52	C
ATOM	5375	CD BGLN C 506	13.443	35.396	78.009	0.50	47.98	C
ATOM	5376	OE1AGLN C 506	9.576	36.260	77.534	0.50	51.64	O
ATOM	5377	OE1BGLN C 506	14.172	36.371	78.271	0.50	49.11	O
ATOM	5378	NE2AGLN C 506	10.462	34.314	76.787	0.50	50.82	N
ATOM	5379	NE2BGLN C 506	13.898	34.308	77.392	0.50	46.84	N
ATOM	5380	N LEU C 507	11.595	37.106	82.794	1.00	47.02	N
ATOM	5381	CA LEU C 507	11.637	38.214	83.728	1.00	46.79	C
ATOM	5382	C LEU C 507	12.799	38.120	84.695	1.00	46.70	C
ATOM	5383	O LEU C 507	13.560	39.089	84.808	1.00	48.95	O
ATOM	5384	CB LEU C 507	10.352	38.324	84.531	1.00	48.26	C
ATOM	5385	CG LEU C 507	9.117	38.715	83.712	1.00	49.58	C
ATOM	5386	CD1 LEU C 507	7.913	38.843	84.649	1.00	50.04	C
ATOM	5387	CD2 LEU C 507	9.362	40.006	82.960	1.00	49.77	C
ATOM	5388	N LEU C 508	12.972	37.000	85.367	1.00	45.26	N
ATOM	5389	CA LEU C 508	14.095	36.831	86.281	1.00	43.54	C
ATOM	5390	C LEU C 508	15.415	36.889	85.546	1.00	42.79	C
ATOM	5391	O LEU C 508	16.349	37.442	86.161	1.00	44.62	O
ATOM	5392	CB LEU C 508	13.903	35.535	87.070	1.00	43.30	C
ATOM	5393	CG LEU C 508	12.574	35.493	87.827	1.00	42.75	C
ATOM	5394	CD1 LEU C 508	12.432	34.160	88.525	1.00	45.27	C
ATOM	5395	CD2 LEU C 508	12.528	36.588	88.857	1.00	43.71	C
ATOM	5396	N LEU C 509	15.593	36.440	84.302	1.00	40.58	N
ATOM	5397	CA LEU C 509	16.930	36.594	83.716	1.00	40.98	C
ATOM	5398	C LEU C 509	17.371	38.056	83.559	1.00	41.80	C
ATOM	5399	O LEU C 509	18.571	38.373	83.557	1.00	40.85	O
ATOM	5400	CB LEU C 509	17.133	35.825	82.417	1.00	39.19	C
ATOM	5401	CG LEU C 509	17.199	34.314	82.518	1.00	38.43	C
ATOM	5402	CD1 LEU C 509	17.193	33.742	81.124	1.00	38.49	C
ATOM	5403	CD2 LEU C 509	18.408	33.853	83.302	1.00	38.49	C
ATOM	5404	N ILE C 510	16.437	39.005	83.446	1.00	42.22	N
ATOM	5405	CA ILE C 510	16.736	40.420	83.312	1.00	41.83	C
ATOM	5406	C ILE C 510	17.415	40.875	84.591	1.00	41.01	C
ATOM	5407	O ILE C 510	18.297	41.731	84.568	1.00	41.48	O
ATOM	5408	CB ILE C 510	15.521	41.294	82.999	1.00	41.89	C
ATOM	5409	CG1 ILE C 510	15.237	41.297	81.490	1.00	45.22	C
ATOM	5410	CG2 ILE C 510	15.738	42.756	83.300	1.00	41.62	C
ATOM	5411	CD1 ILE C 510	13.765	41.061	81.156	1.00	47.45	C
ATOM	5412	N LEU C 511	17.034	40.302	85.721	1.00	40.64	N
ATOM	5413	CA LEU C 511	17.645	40.700	86.982	1.00	41.72	C
ATOM	5414	C LEU C 511	19.161	40.571	86.924	1.00	42.18	C
ATOM	5415	O LEU C 511	19.883	41.400	87.487	1.00	43.39	O
ATOM	5416	CB LEU C 511	17.051	39.931	88.151	1.00	41.42	C

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ATOM	5417	CG LEU C 511	15.549	40.136	88.361	1.00	41.22	C
ATOM	5418	CD1 LEU C 511	15.186	39.555	89.731	1.00	41.54	C
ATOM	5419	CD2 LEU C 511	15.150	41.585	88.240	1.00	39.85	C
ATOM	5420	N SER C 512	19.719	39.597	86.239	1.00	41.63	N
ATOM	5421	CA SER C 512	21.143	39.455	86.122	1.00	41.44	C
ATOM	5422	C SER C 512	21.758	40.706	85.513	1.00	41.95	C
ATOM	5423	O SER C 512	22.722	41.284	86.035	1.00	42.95	O
ATOM	5424	CB SER C 512	21.414	38.338	85.114	1.00	43.11	C
ATOM	5425	OG SER C 512	22.472	37.616	85.722	1.00	47.13	O
ATOM	5426	N HIS C 513	21.211	41.137	84.368	1.00	40.29	N
ATOM	5427	CA HIS C 513	21.684	42.330	83.681	1.00	37.65	C
ATOM	5428	C HIS C 513	21.571	43.508	84.623	1.00	38.21	C
ATOM	5429	O HIS C 513	22.529	44.283	84.760	1.00	38.29	O
ATOM	5430	CB HIS C 513	20.913	42.523	82.391	1.00	37.61	C
ATOM	5431	CG AHIS C 513	21.265	41.340	81.520	0.50	38.24	C
ATOM	5432	CG BHIS C 513	21.461	43.588	81.495	0.50	39.47	C
ATOM	5433	ND1AHIS C 513	20.348	40.481	80.972	0.50	38.41	N
ATOM	5434	ND1BHIS C 513	20.716	44.626	80.974	0.50	39.63	N
ATOM	5435	CD2AHIS C 513	22.479	40.878	81.129	0.50	38.68	C
ATOM	5436	CD2BHIS C 513	22.721	43.759	80.999	0.50	40.24	C
ATOM	5437	CE1AHIS C 513	20.978	39.547	80.280	0.50	38.17	C
ATOM	5438	CE1BHIS C 513	21.484	45.382	80.212	0.50	40.30	C
ATOM	5439	NE2AHIS C 513	22.272	39.767	80.352	0.50	38.14	N
ATOM	5440	NE2BHIS C 513	22.716	44.877	80.208	0.50	40.60	N
ATOM	5441	N ILE C 514	20.451	43.655	85.332	1.00	37.46	N
ATOM	5442	CA ILE C 514	20.347	44.761	86.284	1.00	37.60	C
ATOM	5443	C ILE C 514	21.468	44.626	87.289	1.00	37.99	C
ATOM	5444	O ILE C 514	22.180	45.604	87.576	1.00	38.56	O
ATOM	5445	CB ILE C 514	18.949	44.788	86.900	1.00	38.83	C
ATOM	5446	CG1 ILE C 514	17.942	45.260	85.827	1.00	39.26	C
ATOM	5447	CG2 ILE C 514	18.836	45.675	88.137	1.00	38.87	C
ATOM	5448	CD1 ILE C 514	16.544	44.724	86.101	1.00	37.40	C
ATOM	5449	N ARG C 515	21.778	43.442	87.821	1.00	38.49	N
ATOM	5450	CA ARG C 515	22.918	43.325	88.749	1.00	38.93	C
ATOM	5451	C ARG C 515	24.180	43.899	88.089	1.00	39.23	C
ATOM	5452	O ARG C 515	24.857	44.762	88.618	1.00	37.78	O
ATOM	5453	CB ARG C 515	23.205	41.877	89.137	1.00	38.60	C
ATOM	5454	CG ARG C 515	24.107	41.682	90.328	1.00	39.98	C
ATOM	5455	CD ARG C 515	23.553	42.402	91.524	1.00	42.75	C
ATOM	5456	NE ARG C 515	23.858	41.831	92.818	1.00	45.59	N
ATOM	5457	CZ ARG C 515	23.240	40.730	93.254	1.00	47.39	C
ATOM	5458	NH1 ARG C 515	22.339	40.152	92.476	1.00	48.26	N
ATOM	5459	NH2 ARG C 515	23.526	40.223	94.438	1.00	47.23	N
ATOM	5460	N HIS C 516	24.442	43.367	86.880	1.00	38.97	N
ATOM	5461	CA HIS C 516	25.559	43.743	86.079	1.00	37.57	C

ATOM 5462	C HIS C 516	25.669 45.231 85.924 1.00 37.44	C
ATOM 5463	O HIS C 516	26.724 45.772 86.137 1.00 36.85	O
ATOM 5464	CB HIS C 516	25.484 43.088 84.675 1.00 39.10	C
ATOM 5465	CG HIS C 516	26.800 43.430 83.987 1.00 39.84	C
ATOM 5466	ND1 HIS C 516	28.000 42.830 84.270 1.00 38.68	N
ATOM 5467	CD2 HIS C 516	27.067 44.373 83.053 1.00 39.95	C
ATOM 5468	CE1 HIS C 516	28.926 43.374 83.556 1.00 38.48	C
ATOM 5469	NE2 HIS C 516	28.402 44.310 82.802 1.00 39.09	N
ATOM 5470	N MET C 517	24.624 45.905 85.507 1.00 40.05	N
ATOM 5471	CA MET C 517	24.581 47.349 85.315 1.00 41.49	C
ATOM 5472	C MET C 517	24.887 48.141 86.576 1.00 41.19	C
ATOM 5473	O MET C 517	25.656 49.088 86.572 1.00 40.45	O
ATOM 5474	CB MET C 517	23.133 47.749 84.952 1.00 42.86	C
ATOM 5475	CG MET C 517	23.062 48.179 83.500 1.00 44.59	C
ATOM 5476	SD MET C 517	21.375 48.400 82.948 1.00 45.13	S
ATOM 5477	CE MET C 517	20.821 46.716 83.021 1.00 47.50	C
ATOM 5478	N SER C 518	24.242 47.713 87.662 1.00 41.17	N
ATOM 5479	CA SER C 518	24.431 48.350 88.959 1.00 42.10	C
ATOM 5480	C SER C 518	25.900 48.293 89.378 1.00 41.62	C
ATOM 5481	O SER C 518	26.435 49.226 89.972 1.00 40.04	O
ATOM 5482	CB SER C 518	23.515 47.681 89.976 1.00 43.27	C
ATOM 5483	OG SER C 518	24.029 47.552 91.289 1.00 44.28	O
ATOM 5484	N ASN C 519	26.559 47.178 89.096 1.00 42.60	N
ATOM 5485	CA ASN C 519	27.949 46.967 89.451 1.00 44.06	C
ATOM 5486	C ASN C 519	28.745 47.991 88.681 1.00 45.41	C
ATOM 5487	O ASN C 519	29.549 48.667 89.315 1.00 47.80	O
ATOM 5488	CB ASN C 519	28.448 45.555 89.206 1.00 45.80	C
ATOM 5489	CG ASN C 519	28.018 44.580 90.279 1.00 47.88	C
ATOM 5490	OD1 ASN C 519	27.926 45.010 91.435 1.00 50.31	O
ATOM 5491	ND2 ASN C 519	27.732 43.312 90.024 1.00 48.12	N
ATOM 5492	N LYS C 520	28.523 48.167 87.396 1.00 45.89	N
ATOM 5493	CA LYS C 520	29.236 49.176 86.629 1.00 46.46	C
ATOM 5494	C LYS C 520	28.835 50.560 87.130 1.00 46.04	C
ATOM 5495	O LYS C 520	29.666 51.452 87.255 1.00 47.08	O
ATOM 5496	CB LYS C 520	28.836 49.062 85.154 1.00 48.75	C
ATOM 5497	CG LYS C 520	28.821 47.585 84.751 1.00 50.92	C
ATOM 5498	CD LYS C 520	30.184 47.325 84.145 1.00 53.90	C
ATOM 5499	CE LYS C 520	31.038 46.337 84.914 1.00 55.45	C
ATOM 5500	NZ LYS C 520	32.449 46.457 84.423 1.00 57.07	N
ATOM 5501	N GLY C 521	27.558 50.761 87.425 1.00 44.57	N
ATOM 5502	CA GLY C 521	27.144 52.049 87.936 1.00 44.81	C
ATOM 5503	C GLY C 521	27.929 52.417 89.189 1.00 45.01	C
ATOM 5504	O GLY C 521	28.386 53.562 89.186 1.00 45.65	O
ATOM 5505	N MET C 522	28.095 51.592 90.230 1.00 45.15	N
ATOM 5506	CA MET C 522	28.807 52.064 91.396 1.00 46.35	C

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ATOM	5507	C	MET C 522	30.253	52.370	90.993	1.00	48.58	C
ATOM	5508	O	MET C 522	30.785	53.372	91.449	1.00	49.59	O
ATOM	5509	CB	MET C 522	29.054	51.248	92.623	1.00	46.05	C
ATOM	5510	CG	MET C 522	28.178	50.220	93.195	1.00	47.14	C
ATOM	5511	SD	MET C 522	26.835	50.822	94.200	1.00	48.30	S
ATOM	5512	CE	MET C 522	27.488	52.344	94.834	1.00	47.03	C
ATOM	5513	N	GLU C 523	30.839	51.485	90.186	1.00	50.74	N
ATOM	5514	CA	GLU C 523	32.219	51.708	89.771	1.00	50.96	C
ATOM	5515	C	GLU C 523	32.345	53.103	89.211	1.00	47.76	C
ATOM	5516	O	GLU C 523	33.253	53.809	89.603	1.00	47.73	O
ATOM	5517	CB	GLU C 523	32.667	50.627	88.824	1.00	56.55	C
ATOM	5518	CG	GLU C 523	33.327	49.441	89.503	1.00	64.56	C
ATOM	5519	CD	GLU C 523	34.430	49.763	90.500	1.00	69.18	C
ATOM	5520	OE1	GLU C 523	34.979	50.901	90.485	1.00	71.53	O
ATOM	5521	OE2	GLU C 523	34.775	48.861	91.321	1.00	71.46	O
ATOM	5522	N	HIS C 524	31.443	53.541	88.377	1.00	45.46	N
ATOM	5523	CA	HIS C 524	31.422	54.860	87.801	1.00	45.10	C
ATOM	5524	C	HIS C 524	31.139	55.989	88.775	1.00	45.54	C
ATOM	5525	O	HIS C 524	31.760	57.047	88.813	1.00	43.84	O
ATOM	5526	CB	HIS C 524	30.302	54.867	86.714	1.00	44.35	C
ATOM	5527	CG	HIS C 524	30.172	56.201	86.043	1.00	43.95	C
ATOM	5528	ND1	HIS C 524	29.392	57.207	86.582	1.00	44.66	N
ATOM	5529	CD2	HIS C 524	30.702	56.715	84.921	1.00	43.61	C
ATOM	5530	CE1	HIS C 524	29.451	58.282	85.815	1.00	44.69	C
ATOM	5531	NE2	HIS C 524	30.246	58.006	84.791	1.00	44.31	N
ATOM	5532	N	LEU C 525	30.129	55.837	89.635	1.00	47.24	N
ATOM	5533	CA	LEU C 525	29.737	56.875	90.572	1.00	49.14	C
ATOM	5534	C	LEU C 525	30.940	57.158	91.461	1.00	52.11	C
ATOM	5535	O	LEU C 525	31.220	58.281	91.867	1.00	52.94	O
ATOM	5536	CB	LEU C 525	28.524	56.521	91.430	1.00	47.83	C
ATOM	5537	CG	LEU C 525	28.177	57.531	92.529	1.00	46.65	C
ATOM	5538	CD1	LEU C 525	27.759	58.851	91.904	1.00	46.66	C
ATOM	5539	CD2	LEU C 525	27.043	57.027	93.393	1.00	46.47	C
ATOM	5540	N	TYR C 526	31.622	56.068	91.767	1.00	54.77	N
ATOM	5541	CA	TYR C 526	32.813	56.096	92.574	1.00	57.68	C
ATOM	5542	C	TYR C 526	33.902	56.853	91.852	1.00	58.29	C
ATOM	5543	O	TYR C 526	34.445	57.709	92.533	1.00	59.72	O
ATOM	5544	CB	TYR C 526	33.217	54.646	92.801	1.00	61.45	C
ATOM	5545	CG	TYR C 526	34.415	54.632	93.718	1.00	64.71	C
ATOM	5546	CD1	TYR C 526	34.244	54.801	95.071	1.00	66.72	C
ATOM	5547	CD2	TYR C 526	35.679	54.461	93.207	1.00	66.45	C
ATOM	5548	CE1	TYR C 526	35.325	54.786	95.924	1.00	68.92	C
ATOM	5549	CE2	TYR C 526	36.771	54.443	94.040	1.00	68.71	C
ATOM	5550	CZ	TYR C 526	36.573	54.604	95.385	1.00	70.11	C
ATOM	5551	OH	TYR C 526	37.667	54.593	96.230	1.00	74.04	O

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ATOM	5552	N	SER C 527	34.225	56.605	90.594	1.00	58.79	N
ATOM	5553	CA	SER C 527	35.272	57.426	89.981	1.00	60.63	C
ATOM	5554	C	SER C 527	34.759	58.854	89.919	1.00	61.31	C
ATOM	5555	O	SER C 527	35.465	59.712	90.427	1.00	62.18	O
ATOM	5556	CB	SER C 527	35.716	56.987	88.600	1.00	61.62	C
ATOM	5557	OG	SER C 527	34.564	56.594	87.875	1.00	63.19	O
ATOM	5558	N	MET C 528	33.565	59.150	89.438	1.00	62.55	N
ATOM	5559	CA	MET C 528	33.014	60.493	89.449	1.00	63.34	C
ATOM	5560	C	MET C 528	33.266	61.128	90.814	1.00	64.70	C
ATOM	5561	O	MET C 528	33.634	62.299	90.878	1.00	64.45	O
ATOM	5562	CB	MET C 528	31.510	60.464	89.204	1.00	63.76	C
ATOM	5563	CG	MET C 528	31.041	60.478	87.774	1.00	63.82	C
ATOM	5564	SD	MET C 528	32.156	61.308	86.655	1.00	64.35	S
ATOM	5565	CE	MET C 528	33.156	59.973	86.011	1.00	64.32	C
ATOM	5566	N	LYS C 529	33.086	60.424	91.923	1.00	66.96	N
ATOM	5567	CA	LYS C 529	33.360	60.999	93.229	1.00	70.67	C
ATOM	5568	C	LYS C 529	34.851	61.251	93.419	1.00	72.62	C
ATOM	5569	O	LYS C 529	35.255	62.258	93.987	1.00	73.75	O
ATOM	5570	CB	LYS C 529	32.851	60.090	94.332	1.00	71.56	C
ATOM	5571	CG	LYS C 529	33.790	59.833	95.488	1.00	72.96	C
ATOM	5572	CD	LYS C 529	33.008	59.806	96.780	1.00	75.19	C
ATOM	5573	CE	LYS C 529	33.915	59.413	97.946	1.00	77.78	C
ATOM	5574	NZ	LYS C 529	34.754	58.207	97.686	1.00	78.65	N
ATOM	5575	N	CYS C 530	35.715	60.358	92.984	1.00	75.14	N
ATOM	5576	CA	CYS C 530	37.153	60.555	93.147	1.00	78.53	C
ATOM	5577	C	CYS C 530	37.653	61.716	92.325	1.00	80.00	C
ATOM	5578	O	CYS C 530	38.512	62.511	92.724	1.00	80.94	O
ATOM	5579	CB	CYS C 530	37.834	59.209	92.891	1.00	79.36	C
ATOM	5580	SG	ACYS C 530	37.356	58.049	94.210	0.50	79.14	S
ATOM	5581	SG	BCYS C 530	38.823	59.261	91.373	0.50	82.60	S
ATOM	5582	N	LYS C 531	37.074	61.985	91.168	1.00	81.84	N
ATOM	5583	CA	LYS C 531	37.377	63.114	90.309	1.00	83.53	C
ATOM	5584	C	LYS C 531	36.816	64.403	90.902	1.00	84.60	C
ATOM	5585	O	LYS C 531	36.950	65.501	90.373	1.00	85.02	O
ATOM	5586	CB	LYS C 531	36.725	62.922	88.935	1.00	83.73	C
ATOM	5587	CG	LYS C 531	37.537	62.148	87.932	1.00	85.10	C
ATOM	5588	CD	LYS C 531	38.019	60.789	88.442	1.00	85.76	C
ATOM	5591	N	ASN C 532	36.123	64.337	92.017	1.00	86.34	N
ATOM	5592	CA	ASN C 532	35.525	65.478	92.682	1.00	88.17	C
ATOM	5593	C	ASN C 532	34.576	66.211	91.752	1.00	86.98	C
ATOM	5594	O	ASN C 532	34.735	67.387	91.473	1.00	87.51	O
ATOM	5595	CB	ASN C 532	36.613	66.426	93.177	1.00	91.22	C
ATOM	5596	CG	ASN C 532	37.400	65.789	94.310	1.00	94.52	C
ATOM	5597	OD1	ASN C 532	36.805	65.193	95.222	1.00	96.21	O
ATOM	5598	ND2	ASN C 532	38.724	65.936	94.208	1.00	95.79	N

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ATOM 5599 N VAL C 533	33.576 65.532 91.235 1.00 85.41	N
ATOM 5600 CA VAL C 533	32.575 66.043 90.328 1.00 83.84	C
ATOM 5601 C VAL C 533	31.192 65.917 90.966 1.00 84.07	C
ATOM 5602 O VAL C 533	30.192 66.581 90.690 1.00 85.18	O
ATOM 5603 CB VAL C 533	32.587 65.178 89.053 1.00 83.29	C
ATOM 5604 CG1 VAL C 533	31.687 65.744 87.979 1.00 83.42	C
ATOM 5605 CG2 VAL C 533	33.980 64.923 88.521 1.00 82.88	C
ATOM 5606 N VAL C 534	31.094 64.963 91.882 1.00 83.18	N
ATOM 5607 CA VAL C 534	29.895 64.631 92.612 1.00 82.16	C
ATOM 5608 C VAL C 534	29.866 65.401 93.925 1.00 81.49	C
ATOM 5609 O VAL C 534	30.817 65.427 94.693 1.00 80.19	O
ATOM 5610 CB VAL C 534	29.905 63.124 92.979 1.00 83.14	C
ATOM 5611 CG1 VAL C 534	28.769 62.657 93.896 1.00 82.66	C
ATOM 5612 CG2 VAL C 534	29.879 62.310 91.680 1.00 83.87	C
ATOM 5613 N PRO C 535	28.715 65.988 94.169 1.00 81.72	N
ATOM 5614 CA PRO C 535	28.413 66.702 95.382 1.00 82.22	C
ATOM 5615 C PRO C 535	28.391 65.705 96.543 1.00 83.42	C
ATOM 5616 O PRO C 535	28.315 64.471 96.489 1.00 82.55	O
ATOM 5617 CB PRO C 535	27.037 67.375 95.227 1.00 81.89	C
ATOM 5618 CG PRO C 535	26.639 67.049 93.824 1.00 81.50	C
ATOM 5619 CD PRO C 535	27.549 65.969 93.280 1.00 81.99	C
ATOM 5620 N LEU C 536	28.440 66.333 97.726 1.00 85.25	N
ATOM 5621 CA LEU C 536	28.458 65.656 99.010 1.00 85.26	C
ATOM 5622 C LEU C 536	27.083 65.288 99.544 1.00 84.84	C
ATOM 5623 O LEU C 536	26.782 65.633 100.706 1.00 87.26	O
ATOM 5628 N TYR C 537	26.249 64.610 98.758 1.00 81.93	N
ATOM 5629 CA TYR C 537	24.946 64.232 99.320 1.00 78.85	C
ATOM 5630 C TYR C 537	25.325 63.093 100.266 1.00 76.77	C
ATOM 5631 O TYR C 537	26.030 62.171 99.878 1.00 75.21	O
ATOM 5632 CB TYR C 537	23.950 63.823 98.270 1.00 79.38	C
ATOM 5633 CG TYR C 537	23.674 64.920 97.266 1.00 80.32	C
ATOM 5634 CD1 TYR C 537	23.077 66.101 97.666 1.00 80.91	C
ATOM 5635 CD2 TYR C 537	23.998 64.786 95.923 1.00 80.96	C
ATOM 5636 CE1 TYR C 537	22.810 67.113 96.765 1.00 81.66	C
ATOM 5637 CE2 TYR C 537	23.725 65.799 95.029 1.00 81.20	C
ATOM 5638 CZ TYR C 537	23.135 66.962 95.437 1.00 81.56	C
ATOM 5639 OH TYR C 537	22.870 67.969 94.533 1.00 82.05	O
ATOM 5640 N ASP C 538	24.878 63.218 101.503 1.00 75.21	N
ATOM 5641 CA ASP C 538	25.123 62.267 102.558 1.00 72.00	C
ATOM 5642 C ASP C 538	24.514 60.891 102.464 1.00 66.75	C
ATOM 5643 O ASP C 538	25.237 59.938 102.741 1.00 65.15	O
ATOM 5644 CB ASP C 538	24.546 62.905 103.842 1.00 77.25	C
ATOM 5645 CG ASP C 538	25.685 63.756 104.406 1.00 82.29	C
ATOM 5646 OD1 ASP C 538	26.854 63.294 104.279 1.00 84.32	O
ATOM 5647 OD2 ASP C 538	25.382 64.854 104.952 1.00 85.06	O

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ATOM 5648	N LEU C 539	23.237 60.800 102.109 1.00 61.50	N
ATOM 5649	CA LEU C 539	22.614 59.463 102.040 1.00 57.70	C
ATOM 5650	C LEU C 539	23.202 58.654 100.888 1.00 56.49	C
ATOM 5651	O LEU C 539	23.415 57.430 101.038 1.00 56.40	O
ATOM 5652	CB LEU C 539	21.094 59.590 102.037 1.00 54.92	C
ATOM 5653	CG LEU C 539	20.181 58.390 102.109 1.00 52.57	C
ATOM 5654	CD1 LEU C 539	20.588 57.443 103.233 1.00 52.85	C
ATOM 5655	CD2 LEU C 539	18.728 58.797 102.254 1.00 51.12	C
ATOM 5656	N LEU C 540	23.470 59.331 99.765 1.00 53.82	N
ATOM 5657	CA LEU C 540	24.051 58.684 98.609 1.00 51.49	C
ATOM 5658	C LEU C 540	25.475 58.264 98.937 1.00 51.94	C
ATOM 5659	O LEU C 540	25.864 57.132 98.631 1.00 51.62	O
ATOM 5660	CB LEU C 540	24.025 59.601 97.402 1.00 50.54	C
ATOM 5661	CG LEU C 540	24.540 59.050 96.072 1.00 49.41	C
ATOM 5662	CD1 LEU C 540	23.497 58.167 95.415 1.00 49.15	C
ATOM 5663	CD2 LEU C 540	24.920 60.162 95.125 1.00 49.22	C
ATOM 5664	N LEU C 541	26.295 59.070 99.606 1.00 52.86	N
ATOM 5665	CA LEU C 541	27.647 58.590 99.900 1.00 54.81	C
ATOM 5666	C LEU C 541	27.583 57.402 100.833 1.00 54.48	C
ATOM 5667	O LEU C 541	28.422 56.498 100.786 1.00 55.31	O
ATOM 5668	CB LEU C 541	28.610 59.697 100.352 1.00 57.53	C
ATOM 5669	CG LEU C 541	28.653 60.816 99.296 1.00 61.05	C
ATOM 5670	CD1 LEU C 541	29.463 62.019 99.757 1.00 62.25	C
ATOM 5671	CD2 LEU C 541	29.114 60.322 97.917 1.00 61.64	C
ATOM 5672	N GLU C 542	26.595 57.350 101.704 1.00 53.99	N
ATOM 5673	CA GLU C 542	26.418 56.251 102.640 1.00 52.85	C
ATOM 5674	C GLU C 542	26.178 54.974 101.861 1.00 51.65	C
ATOM 5675	O GLU C 542	26.961 54.046 102.029 1.00 51.91	O
ATOM 5676	CB GLU C 542	25.230 56.537 103.529 1.00 54.48	C
ATOM 5677	CG GLU C 542	25.010 55.532 104.650 1.00 56.13	C
ATOM 5678	CD GLU C 542	23.909 56.070 105.555 1.00 57.89	C
ATOM 5679	OE1 GLU C 542	23.891 57.334 105.706 1.00 59.80	O
ATOM 5680	OE2 GLU C 542	23.135 55.235 106.045 1.00 57.42	O
ATOM 5681	N MET C 543	25.172 54.915 101.007 1.00 50.30	N
ATOM 5682	CA MET C 543	24.941 53.723 100.201 1.00 49.51	C
ATOM 5683	C MET C 543	26.134 53.388 99.327 1.00 49.84	C
ATOM 5684	O MET C 543	26.476 52.234 99.063 1.00 49.91	O
ATOM 5685	CB MET C 543	23.707 54.018 99.348 1.00 50.39	C
ATOM 5686	CG MET C 543	22.554 54.449 100.251 1.00 51.60	C
ATOM 5687	SD MET C 543	21.911 53.008 101.129 1.00 53.05	S
ATOM 5688	CE MET C 543	22.145 53.467 102.831 1.00 52.49	C
ATOM 5689	N LEU C 544	26.855 54.372 98.805 1.00 50.40	N
ATOM 5690	CA LEU C 544	28.028 54.108 97.979 1.00 51.36	C
ATOM 5691	C LEU C 544	29.130 53.494 98.826 1.00 52.36	C
ATOM 5692	O LEU C 544	29.752 52.546 98.374 1.00 51.79	O

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ATOM 5693 CB LEU C 544	28.529 55.356 97.268 1.00 50.22	C
ATOM 5694 CG LEU C 544	29.858 55.297 96.534 1.00 49.15	C
ATOM 5695 CD1 LEU C 544	29.894 54.324 95.377 1.00 48.25	C
ATOM 5696 CD2 LEU C 544	30.186 56.690 96.017 1.00 49.91	C
ATOM 5697 N ASP C 545	29.385 53.991 100.025 1.00 55.73	N
ATOM 5698 CA ASP C 545	30.407 53.413 100.875 1.00 59.57	C
ATOM 5699 C ASP C 545	30.082 51.990 101.298 1.00 59.45	C
ATOM 5700 O ASP C 545	31.051 51.236 101.382 1.00 59.14	O
ATOM 5701 CB ASP C 545	30.688 54.156 102.167 1.00 64.30	C
ATOM 5702 CG ASP C 545	31.229 55.548 101.904 1.00 69.40	C
ATOM 5703 OD1 ASP C 545	31.653 55.841 100.746 1.00 71.67	O
ATOM 5704 OD2 ASP C 545	31.204 56.334 102.902 1.00 71.66	O
ATOM 5705 N ALA C 546	28.827 51.628 101.525 1.00 59.48	N
ATOM 5706 CA ALA C 546	28.511 50.253 101.878 1.00 60.67	C
ATOM 5707 C ALA C 546	29.213 49.276 100.938 1.00 63.24	C
ATOM 5708 O ALA C 546	29.817 48.285 101.346 1.00 63.11	O
ATOM 5709 CB ALA C 546	27.021 50.031 101.782 1.00 60.55	C
ATOM 5710 N HIS C 547	29.145 49.528 99.636 1.00 66.39	N
ATOM 5711 CA HIS C 547	29.733 48.761 98.582 1.00 68.73	C
ATOM 5712 C HIS C 547	31.229 48.744 98.582 1.00 73.05	C
ATOM 5713 O HIS C 547	31.804 47.671 98.445 1.00 74.71	O
ATOM 5714 CB HIS C 547	29.306 49.374 97.221 1.00 66.98	C
ATOM 5715 CG HIS C 547	27.919 48.813 97.109 1.00 65.98	C
ATOM 5716 ND1 HIS C 547	27.619 47.765 96.300 1.00 66.00	N
ATOM 5717 CD2 HIS C 547	26.791 49.151 97.760 1.00 66.17	C
ATOM 5718 CE1 HIS C 547	26.334 47.482 96.431 1.00 66.20	C
ATOM 5719 NE2 HIS C 547	25.809 48.302 97.307 1.00 66.22	N
ATOM 5720 N ARG C 548	31.838 49.906 98.715 1.00 78.91	N
ATOM 5721 CA ARG C 548	33.320 49.931 98.704 1.00 84.25	C
ATOM 5722 C ARG C 548	33.895 49.165 99.889 1.00 84.99	C
ATOM 5723 O ARG C 548	33.110 48.818 100.817 1.00 86.30	O
ATOM 5724 CB ARG C 548	33.796 51.385 98.630 1.00 87.34	C
ATOM 5725 CG ARG C 548	32.949 52.389 97.863 1.00 89.98	C
ATOM 5726 CD ARG C 548	32.592 52.060 96.435 1.00 92.13	C
ATOM 5727 NE ARG C 548	33.453 51.139 95.712 1.00 94.53	N
ATOM 5728 CZ ARG C 548	33.197 50.465 94.601 1.00 95.46	C
ATOM 5729 NH1 ARG C 548	32.046 50.556 93.960 1.00 96.52	N
ATOM 5730 NH2 ARG C 548	34.109 49.668 94.075 1.00 96.02	N
TER 5731 ARG C 548		
HETATM 5732 C1 EST C 600	19.869 58.501 89.282 1.00 35.71	C
HETATM 5733 C2 EST C 600	18.524 58.409 89.623 1.00 37.42	C
HETATM 5734 C3 EST C 600	17.822 57.308 89.220 1.00 38.32	C
HETATM 5735 O3 EST C 600	16.483 57.175 89.546 1.00 38.91	O
HETATM 5736 C4 EST C 600	18.405 56.280 88.463 1.00 38.39	C
HETATM 5737 C5 EST C 600	19.774 56.391 88.128 1.00 36.82	C

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HETATM 5738 C6 EST C 600	20.294	55.421	87.091	1.00	37.10	C
HETATM 5739 C7 EST C 600	21.704	55.728	86.604	1.00	36.50	C
HETATM 5740 C8 EST C 600	22.535	56.278	87.762	1.00	36.05	C
HETATM 5741 C9 EST C 600	21.930	57.638	88.186	1.00	35.94	C
HETATM 5742 C10 EST C 600	20.489	57.499	88.548	1.00	35.28	C
HETATM 5743 C11 EST C 600	22.728	58.299	89.298	1.00	35.64	C
HETATM 5744 C12 EST C 600	24.163	58.593	88.768	1.00	35.50	C
HETATM 5745 C13 EST C 600	24.772	57.250	88.396	1.00	35.67	C
HETATM 5746 C14 EST C 600	23.932	56.551	87.306	1.00	35.16	C
HETATM 5747 C15 EST C 600	24.852	55.358	87.058	1.00	35.36	C
HETATM 5748 C16 EST C 600	26.207	56.101	86.772	1.00	36.43	C
HETATM 5749 C17 EST C 600	26.129	57.338	87.694	1.00	36.25	C
HETATM 5750 O17 EST C 600	27.295	57.444	88.500	1.00	35.57	O
HETATM 5751 C18 EST C 600	24.895	56.358	89.623	1.00	35.57	C
ATOM 5752 N SER D 305	17.263	25.806	62.987	1.00	89.17	N
ATOM 5753 CA SER D 305	18.225	25.610	64.101	1.00	88.43	C
ATOM 5754 C SER D 305	17.959	24.319	64.864	1.00	87.99	C
ATOM 5755 O SER D 305	16.871	24.093	65.388	1.00	87.53	O
ATOM 5756 CB SER D 305	18.202	26.835	65.025	1.00	88.28	C
ATOM 5757 OG SER D 305	19.076	26.687	66.122	1.00	88.48	O
ATOM 5758 N LEU D 306	18.986	23.473	64.970	1.00	87.77	N
ATOM 5759 CA LEU D 306	18.892	22.224	65.722	1.00	87.21	C
ATOM 5760 C LEU D 306	18.291	22.594	67.077	1.00	85.66	C
ATOM 5761 O LEU D 306	17.265	22.095	67.508	1.00	85.96	O
ATOM 5762 CB LEU D 306	20.260	21.563	65.896	1.00	87.76	C
ATOM 5766 N ALA D 307	18.916	23.530	67.764	1.00	83.98	N
ATOM 5767 CA ALA D 307	18.454	24.030	69.037	1.00	82.92	C
ATOM 5768 C ALA D 307	16.936	23.984	69.095	1.00	81.76	C
ATOM 5769 O ALA D 307	16.381	23.264	69.911	1.00	81.64	O
ATOM 5770 CB ALA D 307	18.859	25.491	69.224	1.00	83.73	C
ATOM 5771 N LEU D 308	16.268	24.720	68.224	1.00	81.06	N
ATOM 5772 CA LEU D 308	14.821	24.770	68.211	1.00	80.81	C
ATOM 5773 C LEU D 308	14.111	23.495	67.849	1.00	81.21	C
ATOM 5774 O LEU D 308	12.876	23.519	67.861	1.00	83.27	O
ATOM 5775 CB LEU D 308	14.399	25.920	67.280	1.00	80.70	C
ATOM 5776 CG LEU D 308	14.927	27.298	67.651	1.00	80.94	C
ATOM 5777 CD1 LEU D 308	14.130	28.397	66.971	1.00	81.19	C
ATOM 5778 CD2 LEU D 308	14.940	27.533	69.155	1.00	81.20	C
ATOM 5779 N SER D 309	14.715	22.378	67.525	1.00	80.53	N
ATOM 5780 CA SER D 309	14.075	21.138	67.169	1.00	79.50	C
ATOM 5781 C SER D 309	14.253	20.044	68.198	1.00	78.69	C
ATOM 5782 O SER D 309	13.378	19.186	68.319	1.00	79.89	O
ATOM 5783 CB SER D 309	14.740	20.609	65.891	1.00	80.73	C
ATOM 5784 OG SER D 309	14.751	21.696	64.969	1.00	83.38	O
ATOM 5785 N LEU D 310	15.383	20.027	68.902	1.00	76.78	N

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ATOM 5786 CA LEU D 310	15.586 18.976 69.894 1.00 74.02	C
ATOM 5787 C LEU D 310	14.459 19.034 70.927 1.00 72.78	C
ATOM 5788 O LEU D 310	13.795 20.037 71.154 1.00 72.43	O
ATOM 5789 CB LEU D 310	16.950 19.048 70.540 1.00 73.54	C
ATOM 5790 CG LEU D 310	18.073 19.617 69.677 1.00 72.90	C
ATOM 5791 CD1 LEU D 310	18.593 20.870 70.346 1.00 73.00	C
ATOM 5792 CD2 LEU D 310	19.183 18.589 69.545 1.00 73.78	C
ATOM 5793 N THR D 311	14.248 17.880 71.528 1.00 71.14	N
ATOM 5794 CA THR D 311	13.223 17.687 72.536 1.00 69.71	C
ATOM 5795 C THR D 311	13.896 17.914 73.860 1.00 69.14	C
ATOM 5796 O THR D 311	15.114 17.705 73.880 1.00 69.46	O
ATOM 5797 CB THR D 311	12.696 16.259 72.386 1.00 70.04	C
ATOM 5798 OG1 THR D 311	13.681 15.274 72.691 1.00 69.74	O
ATOM 5799 CG2 THR D 311	12.246 16.024 70.952 1.00 69.87	C
ATOM 5800 N ALA D 312	13.215 18.263 74.934 1.00 68.71	N
ATOM 5801 CA ALA D 312	13.912 18.480 76.198 1.00 68.63	C
ATOM 5802 C ALA D 312	14.925 17.380 76.447 1.00 68.98	C
ATOM 5803 O ALA D 312	16.044 17.697 76.851 1.00 69.24	O
ATOM 5804 CB ALA D 312	12.983 18.641 77.366 1.00 68.89	C
ATOM 5805 N ASP D 313	14.592 16.129 76.206 1.00 70.40	N
ATOM 5806 CA ASP D 313	15.559 15.061 76.417 1.00 72.08	C
ATOM 5807 C ASP D 313	16.794 15.157 75.562 1.00 69.74	C
ATOM 5808 O ASP D 313	17.855 14.913 76.108 1.00 68.84	O
ATOM 5809 CB ASP D 313	14.902 13.680 76.231 1.00 76.64	C
ATOM 5810 CG ASP D 313	14.055 13.442 77.472 1.00 80.32	C
ATOM 5811 OD1 ASP D 313	14.677 13.473 78.554 1.00 82.36	O
ATOM 5812 OD2 ASP D 313	12.822 13.267 77.370 1.00 82.59	O
ATOM 5813 N GLN D 314	16.722 15.478 74.298 1.00 69.16	N
ATOM 5814 CA GLN D 314	17.892 15.578 73.433 1.00 69.14	C
ATOM 5815 C GLN D 314	18.762 16.748 73.860 1.00 67.43	C
ATOM 5816 O GLN D 314	19.983 16.632 73.906 1.00 67.85	O
ATOM 5817 CB GLN D 314	17.494 15.775 71.972 1.00 71.65	C
ATOM 5818 CG GLN D 314	16.256 14.951 71.631 1.00 74.11	C
ATOM 5819 CD GLN D 314	15.887 15.055 70.179 1.00 76.25	C
ATOM 5820 OE1 GLN D 314	14.964 15.747 69.756 1.00 77.94	O
ATOM 5821 NE2 GLN D 314	16.681 14.318 69.406 1.00 77.91	N
ATOM 5822 N MET D 315	18.104 17.860 74.181 1.00 64.64	N
ATOM 5823 CA MET D 315	18.765 19.058 74.684 1.00 60.92	C
ATOM 5824 C MET D 315	19.646 18.678 75.867 1.00 58.71	C
ATOM 5825 O MET D 315	20.853 18.867 75.830 1.00 57.58	O
ATOM 5826 CB MET D 315	17.704 20.050 75.130 1.00 60.65	C
ATOM 5827 CG MET D 315	18.233 21.397 75.579 1.00 61.16	C
ATOM 5828 SD MET D 315	18.673 22.508 74.236 1.00 60.09	S
ATOM 5829 CE MET D 315	20.398 22.700 74.561 1.00 60.98	C
ATOM 5830 N VAL D 316	19.068 18.104 76.912 1.00 57.26	N

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ATOM 5831	CA VAL D 316	19.812 17.687 78.077 1.00 57.08	C
ATOM 5832	C VAL D 316	21.023 16.839 77.740 1.00 58.01	C
ATOM 5833	O VAL D 316	22.096 17.031 78.310 1.00 58.94	O
ATOM 5834	CB VAL D 316	18.988 16.858 79.081 1.00 56.33	C
ATOM 5835	CG1 VAL D 316	19.824 16.374 80.254 1.00 55.69	C
ATOM 5836	CG2 VAL D 316	17.844 17.705 79.587 1.00 56.75	C
ATOM 5837	N SER D 317	20.878 15.857 76.879 1.00 59.33	N
ATOM 5838	CA SER D 317	21.985 14.964 76.529 1.00 60.63	C
ATOM 5839	C SER D 317	23.029 15.693 75.710 1.00 58.92	C
ATOM 5840	O SER D 317	24.220 15.563 75.947 1.00 59.22	O
ATOM 5841	CB SER D 317	21.463 13.769 75.722 1.00 62.99	C
ATOM 5842	OG SER D 317	20.092 14.067 75.446 1.00 66.00	O
ATOM 5843	N ALA D 318	22.565 16.502 74.770 1.00 57.14	N
ATOM 5844	CA ALA D 318	23.496 17.287 73.969 1.00 55.70	C
ATOM 5845	C ALA D 318	24.400 18.069 74.923 1.00 55.38	C
ATOM 5846	O ALA D 318	25.619 18.111 74.754 1.00 55.90	O
ATOM 5847	CB ALA D 318	22.719 18.241 73.089 1.00 55.59	C
ATOM 5848	N LEU D 319	23.784 18.710 75.917 1.00 54.11	N
ATOM 5849	CA LEU D 319	24.469 19.510 76.902 1.00 52.31	C
ATOM 5850	C LEU D 319	25.325 18.635 77.770 1.00 53.63	C
ATOM 5851	O LEU D 319	26.487 18.939 77.974 1.00 53.68	O
ATOM 5852	CB LEU D 319	23.447 20.269 77.728 1.00 50.38	C
ATOM 5853	CG LEU D 319	22.730 21.396 76.981 1.00 48.85	C
ATOM 5854	CD1 LEU D 319	21.761 22.043 77.948 1.00 48.88	C
ATOM 5855	CD2 LEU D 319	23.707 22.414 76.424 1.00 48.75	C
ATOM 5856	N LEU D 320	24.790 17.509 78.221 1.00 55.98	N
ATOM 5857	CA LEU D 320	25.548 16.575 79.053 1.00 57.36	C
ATOM 5858	C LEU D 320	26.763 16.093 78.304 1.00 60.13	C
ATOM 5859	O LEU D 320	27.824 15.833 78.843 1.00 62.13	O
ATOM 5860	CB LEU D 320	24.641 15.409 79.440 1.00 56.38	C
ATOM 5861	CG LEU D 320	23.973 15.674 80.783 1.00 56.64	C
ATOM 5862	CD1 LEU D 320	23.038 14.548 81.152 1.00 56.78	C
ATOM 5863	CD2 LEU D 320	25.048 15.937 81.831 1.00 56.47	C
ATOM 5864	N ASP D 321	26.669 15.954 77.004 1.00 63.24	N
ATOM 5865	CA ASP D 321	27.748 15.558 76.161 1.00 66.90	C
ATOM 5866	C ASP D 321	28.809 16.606 75.920 1.00 66.24	C
ATOM 5867	O ASP D 321	29.986 16.236 75.844 1.00 68.96	O
ATOM 5868	CB ASP D 321	27.206 15.266 74.754 1.00 72.33	C
ATOM 5869	CG ASP D 321	27.150 13.752 74.641 1.00 77.63	C
ATOM 5870	OD1 ASP D 321	27.464 13.085 75.664 1.00 80.31	O
ATOM 5871	OD2 ASP D 321	26.783 13.313 73.522 1.00 80.62	O
ATOM 5872	N ALA D 322	28.452 17.873 75.776 1.00 62.64	N
ATOM 5873	CA ALA D 322	29.463 18.891 75.524 1.00 58.96	C
ATOM 5874	C ALA D 322	30.353 19.113 76.735 1.00 58.25	C
ATOM 5875	O ALA D 322	31.386 19.785 76.571 1.00 58.76	O

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ATOM	5876	CB	ALA D 322	28.714	20.137	75.123	1.00	57.92	C
ATOM	5877	N	GLU D 323	30.011	18.611	77.925	1.00	55.35	N
ATOM	5878	CA	GLU D 323	30.845	18.879	79.074	1.00	54.74	C
ATOM	5879	C	GLU D 323	32.304	18.681	78.796	1.00	55.52	C
ATOM	5880	O	GLU D 323	32.712	17.725	78.133	1.00	59.31	O
ATOM	5881	CB	GLU D 323	30.312	18.010	80.193	1.00	54.82	C
ATOM	5882	CG	GLU D 323	29.099	18.698	80.835	1.00	55.81	C
ATOM	5883	CD	GLU D 323	29.559	19.859	81.695	1.00	56.08	C
ATOM	5884	OE1	GLU D 323	30.318	19.628	82.658	1.00	56.53	O
ATOM	5885	OE2	GLU D 323	29.194	21.000	81.389	1.00	56.04	O
ATOM	5886	N	PRO D 324	33.174	19.567	79.226	1.00	54.31	N
ATOM	5887	CA	PRO D 324	34.603	19.489	79.046	1.00	53.97	C
ATOM	5888	C	PRO D 324	35.190	18.524	80.065	1.00	54.99	C
ATOM	5889	O	PRO D 324	34.527	18.093	81.003	1.00	55.95	O
ATOM	5890	CB	PRO D 324	35.145	20.897	79.323	1.00	53.50	C
ATOM	5891	CG	PRO D 324	34.116	21.390	80.280	1.00	53.81	C
ATOM	5892	CD	PRO D 324	32.788	20.736	80.013	1.00	54.57	C
ATOM	5893	N	PRO D 325	36.446	18.172	79.897	1.00	55.53	N
ATOM	5894	CA	PRO D 325	37.181	17.283	80.757	1.00	56.14	C
ATOM	5895	C	PRO D 325	37.550	18.011	82.030	1.00	57.89	C
ATOM	5896	O	PRO D 325	37.570	19.230	81.928	1.00	58.94	O
ATOM	5897	CB	PRO D 325	38.475	16.991	79.994	1.00	56.36	C
ATOM	5898	CG	PRO D 325	38.641	18.258	79.193	1.00	56.53	C
ATOM	5899	CD	PRO D 325	37.258	18.691	78.774	1.00	56.29	C
ATOM	5900	N	ILE D 326	37.844	17.373	83.144	1.00	60.27	N
ATOM	5901	CA	ILE D 326	38.234	18.094	84.359	1.00	62.33	C
ATOM	5902	C	ILE D 326	39.764	18.203	84.337	1.00	60.55	C
ATOM	5903	O	ILE D 326	40.396	17.168	84.156	1.00	60.17	O
ATOM	5904	CB	ILE D 326	37.862	17.459	85.718	1.00	64.81	C
ATOM	5905	CG1	ILE D 326	38.409	16.036	85.871	1.00	66.11	C
ATOM	5906	CG2	ILE D 326	36.355	17.465	86.018	1.00	64.84	C
ATOM	5907	CD1	ILE D 326	38.045	15.056	84.781	1.00	67.42	C
ATOM	5908	N	LEU D 327	40.333	19.374	84.487	1.00	59.44	N
ATOM	5909	CA	LEU D 327	41.786	19.485	84.472	1.00	58.05	C
ATOM	5910	C	LEU D 327	42.321	19.216	85.865	1.00	58.59	C
ATOM	5911	O	LEU D 327	41.603	19.137	86.848	1.00	58.48	O
ATOM	5912	CB	LEU D 327	42.181	20.876	83.979	1.00	57.02	C
ATOM	5913	CG	LEU D 327	41.514	21.360	82.693	1.00	55.77	C
ATOM	5914	CD1	LEU D 327	42.331	22.494	82.103	1.00	55.92	C
ATOM	5915	CD2	LEU D 327	41.316	20.258	81.683	1.00	54.67	C
ATOM	5916	N	TYR D 328	43.625	19.048	85.975	1.00	60.29	N
ATOM	5917	CA	TYR D 328	44.309	18.821	87.228	1.00	61.30	C
ATOM	5918	C	TYR D 328	45.235	20.026	87.385	1.00	61.97	C
ATOM	5919	O	TYR D 328	45.706	20.500	86.372	1.00	60.71	O
ATOM	5920	CB	TYR D 328	45.173	17.565	87.243	1.00	62.10	C

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ATOM	5921	CG TYR D 328	44.282	16.365	87.402	1.00	62.68	C
ATOM	5922	CD1 TYR D 328	43.836	16.059	88.678	1.00	64.19	C
ATOM	5923	CD2 TYR D 328	43.876	15.593	86.339	1.00	62.75	C
ATOM	5924	CE1 TYR D 328	42.988	15.002	88.813	1.00	64.91	C
ATOM	5925	CE2 TYR D 328	43.040	14.504	86.495	1.00	63.95	C
ATOM	5926	CZ TYR D 328	42.598	14.208	87.761	1.00	65.57	C
ATOM	5927	OH TYR D 328	41.757	13.126	87.962	1.00	67.54	O
ATOM	5928	N SER D 329	45.439	20.471	88.599	1.00	64.59	N
ATOM	5929	CA SER D 329	46.299	21.612	88.807	1.00	67.29	C
ATOM	5930	C SER D 329	47.740	21.149	88.595	1.00	70.20	C
ATOM	5931	O SER D 329	48.045	20.027	88.947	1.00	69.65	O
ATOM	5932	CB SER D 329	46.144	22.172	90.214	1.00	66.33	C
ATOM	5933	OG SER D 329	47.308	22.949	90.451	1.00	66.37	O
ATOM	5934	N GLU D 330	48.571	22.000	88.029	1.00	74.75	N
ATOM	5935	CA GLU D 330	49.973	21.777	87.782	1.00	78.76	C
ATOM	5936	C GLU D 330	50.689	21.590	89.127	1.00	80.31	C
ATOM	5937	O GLU D 330	50.542	22.260	90.146	1.00	80.76	O
ATOM	5938	CB GLU D 330	50.572	22.972	87.056	1.00	82.49	C
ATOM	5939	CG GLU D 330	51.622	23.768	87.798	1.00	88.02	C
ATOM	5940	CD GLU D 330	51.312	25.158	88.310	1.00	91.02	C
ATOM	5941	OE1 GLU D 330	51.356	26.143	87.516	1.00	92.36	O
ATOM	5942	OE2 GLU D 330	51.036	25.301	89.529	1.00	92.28	O
ATOM	5943	N PHE D 337	52.571	28.436	99.492	1.00	85.53	N
ATOM	5944	CA PHE D 337	51.517	29.299	98.999	1.00	84.78	C
ATOM	5945	C PHE D 337	51.805	30.749	99.360	1.00	83.45	C
ATOM	5946	O PHE D 337	51.984	31.023	100.540	1.00	84.23	O
ATOM	5947	CB PHE D 337	50.138	28.994	99.593	1.00	85.69	C
ATOM	5948	CG PHE D 337	49.414	27.933	98.825	1.00	86.82	C
ATOM	5949	CD1 PHE D 337	49.653	27.716	97.485	1.00	87.53	C
ATOM	5950	CD2 PHE D 337	48.492	27.138	99.467	1.00	87.80	C
ATOM	5951	CE1 PHE D 337	48.988	26.725	96.804	1.00	88.56	C
ATOM	5952	CE2 PHE D 337	47.808	26.143	98.802	1.00	88.39	C
ATOM	5953	CZ PHE D 337	48.060	25.940	97.460	1.00	88.89	C
ATOM	5954	N SER D 338	51.811	31.600	98.360	1.00	80.74	N
ATOM	5955	CA SER D 338	52.050	33.020	98.634	1.00	77.84	C
ATOM	5956	C SER D 338	51.096	33.751	97.717	1.00	75.96	C
ATOM	5957	O SER D 338	50.725	33.148	96.709	1.00	76.63	O
ATOM	5958	CB SER D 338	53.489	33.358	98.294	1.00	77.31	C
ATOM	5959	OG SER D 338	53.793	32.794	97.042	1.00	77.40	O
ATOM	5960	N GLU D 339	50.740	34.984	97.978	1.00	73.50	N
ATOM	5961	CA GLU D 339	49.848	35.681	97.047	1.00	71.53	C
ATOM	5962	C GLU D 339	50.264	35.297	95.634	1.00	69.88	C
ATOM	5963	O GLU D 339	49.482	34.729	94.879	1.00	69.90	O
ATOM	5964	CB GLU D 339	49.905	37.153	97.342	1.00	71.56	C
ATOM	5965	CG GLU D 339	49.622	38.158	96.250	1.00	72.26	C

ATOM 5966 CD GLU D 339	49.019 39.364 96.939 1.00 73.84	C
ATOM 5967 OE1 GLU D 339	48.099 39.104 97.747 1.00 74.71	O
ATOM 5968 OE2 GLU D 339	49.466 40.503 96.691 1.00 75.27	O
ATOM 5969 N ALA D 340	51.503 35.551 95.251 1.00 68.32	N
ATOM 5970 CA ALA D 340	51.964 35.211 93.926 1.00 66.84	C
ATOM 5971 C ALA D 340	51.857 33.743 93.572 1.00 65.40	C
ATOM 5972 O ALA D 340	51.426 33.462 92.464 1.00 65.53	O
ATOM 5973 CB ALA D 340	53.428 35.594 93.817 1.00 68.19	C
ATOM 5974 N SER D 341	52.278 32.843 94.438 1.00 64.29	N
ATOM 5975 CA SER D 341	52.224 31.429 94.117 1.00 63.99	C
ATOM 5976 C SER D 341	50.790 30.981 93.942 1.00 63.79	C
ATOM 5977 O SER D 341	50.499 30.238 92.997 1.00 65.43	O
ATOM 5978 CB SER D 341	52.954 30.602 95.145 1.00 65.29	C
ATOM 5979 OG SER D 341	52.117 29.756 95.890 1.00 66.80	O
ATOM 5980 N MET D 342	49.868 31.390 94.800 1.00 62.43	N
ATOM 5981 CA MET D 342	48.477 31.005 94.670 1.00 60.24	C
ATOM 5982 C MET D 342	47.790 31.641 93.472 1.00 58.97	C
ATOM 5983 O MET D 342	47.111 30.947 92.714 1.00 60.15	O
ATOM 5984 CB MET D 342	47.632 31.381 95.885 1.00 60.40	C
ATOM 5985 CG MET D 342	46.340 30.569 95.771 1.00 60.77	C
ATOM 5986 SD MET D 342	45.537 30.453 97.364 1.00 61.98	S
ATOM 5987 CE MET D 342	45.044 32.154 97.570 1.00 61.13	C
ATOM 5988 N MET D 343	47.943 32.936 93.235 1.00 56.72	N
ATOM 5989 CA MET D 343	47.372 33.564 92.053 1.00 54.94	C
ATOM 5990 C MET D 343	47.886 32.813 90.835 1.00 54.84	C
ATOM 5991 O MET D 343	47.107 32.531 89.932 1.00 56.41	O
ATOM 5992 CB MET D 343	47.725 35.027 91.899 1.00 54.20	C
ATOM 5993 CG MET D 343	46.877 35.829 92.890 1.00 54.05	C
ATOM 5994 SD MET D 343	45.115 35.671 92.551 1.00 51.49	S
ATOM 5995 CE MET D 343	45.079 35.840 90.775 1.00 52.48	C
ATOM 5996 N GLY D 344	49.158 32.441 90.819 1.00 53.10	N
ATOM 5997 CA GLY D 344	49.655 31.667 89.709 1.00 52.12	C
ATOM 5998 C GLY D 344	48.854 30.395 89.497 1.00 51.85	C
ATOM 5999 O GLY D 344	48.396 30.211 88.372 1.00 52.11	O
ATOM 6000 N LEU D 345	48.658 29.497 90.457 1.00 51.64	N
ATOM 6001 CA LEU D 345	47.931 28.273 90.199 1.00 52.00	C
ATOM 6002 C LEU D 345	46.528 28.472 89.651 1.00 51.27	C
ATOM 6003 O LEU D 345	46.087 27.901 88.665 1.00 51.16	O
ATOM 6004 CB LEU D 345	47.632 27.522 91.490 1.00 54.64	C
ATOM 6005 CG LEU D 345	48.809 26.826 92.152 1.00 57.14	C
ATOM 6006 CD1 LEU D 345	48.899 27.410 93.558 1.00 58.00	C
ATOM 6007 CD2 LEU D 345	48.609 25.316 92.126 1.00 57.34	C
ATOM 6008 N LEU D 346	45.815 29.290 90.432 1.00 49.48	N
ATOM 6009 CA LEU D 346	44.426 29.633 90.113 1.00 46.93	C
ATOM 6010 C LEU D 346	44.321 30.166 88.701 1.00 45.54	C

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ATOM 6011	O LEU D 346	43.616 29.725 87.814 1.00 43.40	O
ATOM 6012	CB LEU D 346	44.053 30.607 91.219 1.00 46.39	C
ATOM 6013	CG LEU D 346	43.730 29.934 92.553 1.00 46.28	C
ATOM 6014	CD1 LEU D 346	42.954 30.921 93.427 1.00 47.05	C
ATOM 6015	CD2 LEU D 346	42.957 28.648 92.439 1.00 44.06	C
ATOM 6016	N THR D 347	45.136 31.171 88.432 1.00 45.12	N
ATOM 6017	CA THR D 347	45.245 31.813 87.130 1.00 44.75	C
ATOM 6018	C THR D 347	45.663 30.858 86.058 1.00 44.99	C
ATOM 6019	O THR D 347	45.116 30.886 84.965 1.00 46.02	O
ATOM 6020	CB THR D 347	46.194 32.989 87.399 1.00 44.97	C
ATOM 6021	OG1 THR D 347	45.363 34.166 87.260 1.00 46.54	O
ATOM 6022	CG2 THR D 347	47.482 32.992 86.660 1.00 43.19	C
ATOM 6023	N ASN D 348	46.589 29.951 86.286 1.00 45.79	N
ATOM 6024	CA ASN D 348	47.047 28.979 85.323 1.00 46.24	C
ATOM 6025	C ASN D 348	45.907 28.023 85.019 1.00 45.11	C
ATOM 6026	O ASN D 348	45.584 27.686 83.891 1.00 46.36	O
ATOM 6027	CB ASN D 348	48.233 28.214 85.903 1.00 49.70	C
ATOM 6028	CG ASN D 348	48.707 27.068 85.007 1.00 53.34	C
ATOM 6029	OD1 ASN D 348	48.323 25.881 85.136 1.00 54.22	O
ATOM 6030	ND2 ASN D 348	49.568 27.482 84.068 1.00 54.27	N
ATOM 6031	N LEU D 349	45.231 27.538 86.040 1.00 43.17	N
ATOM 6032	CA LEU D 349	44.129 26.598 85.875 1.00 41.36	C
ATOM 6033	C LEU D 349	43.062 27.234 85.022 1.00 41.05	C
ATOM 6034	O LEU D 349	42.587 26.634 84.073 1.00 41.06	O
ATOM 6035	CB LEU D 349	43.656 26.169 87.257 1.00 41.42	C
ATOM 6036	CG LEU D 349	42.504 25.188 87.265 1.00 41.73	C
ATOM 6037	CD1 LEU D 349	42.911 23.883 86.597 1.00 42.98	C
ATOM 6038	CD2 LEU D 349	41.988 24.925 88.660 1.00 42.12	C
ATOM 6039	N ALA D 350	42.696 28.483 85.280 1.00 41.15	N
ATOM 6040	CA ALA D 350	41.727 29.251 84.530 1.00 40.49	C
ATOM 6041	C ALA D 350	42.117 29.313 83.060 1.00 40.66	C
ATOM 6042	O ALA D 350	41.367 28.953 82.161 1.00 39.77	O
ATOM 6043	CB ALA D 350	41.615 30.689 85.022 1.00 39.66	C
ATOM 6044	N ASP D 351	43.347 29.758 82.819 1.00 41.67	N
ATOM 6045	CA ASP D 351	43.826 29.852 81.455 1.00 43.72	C
ATOM 6046	C ASP D 351	43.624 28.553 80.702 1.00 44.04	C
ATOM 6047	O ASP D 351	43.309 28.530 79.516 1.00 44.68	O
ATOM 6048	CB ASP D 351	45.277 30.315 81.445 1.00 46.16	C
ATOM 6049	CG ASP D 351	45.749 30.472 80.006 1.00 49.30	C
ATOM 6050	OD1 ASP D 351	45.392 31.418 79.275 1.00 50.41	O
ATOM 6051	OD2 ASP D 351	46.520 29.592 79.570 1.00 51.19	O
ATOM 6052	N ARG D 352	43.819 27.406 81.324 1.00 44.03	N
ATOM 6053	CA ARG D 352	43.670 26.124 80.674 1.00 44.01	C
ATOM 6054	C ARG D 352	42.236 25.737 80.426 1.00 44.62	C
ATOM 6055	O ARG D 352	41.877 25.232 79.361 1.00 44.95	O

SUBSTITUTE SHEET (RULE 26)

ATOM	6056	CB	ARG D 352	44.393	25.123	81.542	1.00	44.71	C
ATOM	6057	CG	ARG D 352	45.899	25.219	81.311	1.00	45.89	C
ATOM	6058	CD	ARG D 352	46.400	23.761	81.449	1.00	47.71	C
ATOM	6059	NE	ARG D 352	46.531	23.597	82.889	1.00	50.31	N
ATOM	6060	CZ	ARG D 352	46.114	22.564	83.619	1.00	50.39	C
ATOM	6061	NH1	ARG D 352	45.535	21.583	82.950	1.00	49.57	N
ATOM	6062	NH2	ARG D 352	46.380	22.717	84.914	1.00	50.10	N
ATOM	6063	N	GLU D 353	41.343	25.991	81.381	1.00	44.73	N
ATOM	6064	CA	GLU D 353	39.923	25.680	81.195	1.00	43.30	C
ATOM	6065	C	GLU D 353	39.313	26.527	80.081	1.00	43.03	C
ATOM	6066	O	GLU D 353	38.349	26.140	79.421	1.00	43.08	O
ATOM	6067	CB	GLU D 353	39.159	25.986	82.467	1.00	42.61	C
ATOM	6068	CG	GLU D 353	39.784	25.428	83.731	1.00	43.36	C
ATOM	6069	CD	GLU D 353	38.795	25.481	84.878	1.00	43.75	C
ATOM	6070	OE1	GLU D 353	37.708	24.897	84.813	1.00	43.47	O
ATOM	6071	OE2	GLU D 353	39.087	26.148	85.880	1.00	45.48	O
ATOM	6072	N	LEU D 354	39.872	27.713	79.843	1.00	42.10	N
ATOM	6073	CA	LEU D 354	39.372	28.627	78.849	1.00	41.53	C
ATOM	6074	C	LEU D 354	39.414	27.990	77.488	1.00	41.63	C
ATOM	6075	O	LEU D 354	38.515	28.146	76.668	1.00	41.52	O
ATOM	6076	CB	LEU D 354	40.124	29.967	78.893	1.00	41.46	C
ATOM	6077	CG	LEU D 354	39.490	30.887	79.963	1.00	40.08	C
ATOM	6078	CD1	LEU D 354	40.509	31.876	80.452	1.00	39.39	C
ATOM	6079	CD2	LEU D 354	38.254	31.514	79.349	1.00	39.73	C
ATOM	6080	N	VAL D 355	40.476	27.242	77.253	1.00	42.96	N
ATOM	6081	CA	VAL D 355	40.602	26.533	75.952	1.00	43.04	C
ATOM	6082	C	VAL D 355	39.447	25.551	75.825	1.00	43.28	C
ATOM	6083	O	VAL D 355	38.664	25.632	74.882	1.00	43.52	O
ATOM	6084	CB	VAL D 355	41.952	25.809	75.905	1.00	40.76	C
ATOM	6085	CG1	VAL D 355	42.078	24.985	74.684	1.00	40.05	C
ATOM	6086	CG2	VAL D 355	42.987	26.919	75.932	1.00	42.11	C
ATOM	6087	N	HIS D 356	39.302	24.678	76.814	1.00	42.64	N
ATOM	6088	CA	HIS D 356	38.199	23.750	76.794	1.00	44.51	C
ATOM	6089	C	HIS D 356	36.873	24.475	76.676	1.00	43.62	C
ATOM	6090	O	HIS D 356	35.992	24.023	75.945	1.00	42.64	O
ATOM	6091	CB	HIS D 356	38.278	22.894	78.084	1.00	48.27	C
ATOM	6092	CG	HIS D 356	39.531	22.091	77.914	1.00	51.20	C
ATOM	6093	ND1	HIS D 356	39.548	20.794	77.478	1.00	53.46	N
ATOM	6094	CD2	HIS D 356	40.812	22.436	78.082	1.00	52.88	C
ATOM	6095	CE1	HIS D 356	40.802	20.377	77.407	1.00	53.64	C
ATOM	6096	NE2	HIS D 356	41.603	21.351	77.765	1.00	53.38	N
ATOM	6097	N	MET D 357	36.716	25.583	77.406	1.00	43.17	N
ATOM	6098	CA	MET D 357	35.488	26.349	77.384	1.00	42.35	C
ATOM	6099	C	MET D 357	34.999	26.734	75.986	1.00	42.06	C
ATOM	6100	O	MET D 357	33.834	26.548	75.656	1.00	41.73	O

ATOM	6101	CB	MET D 357	35.567	27.657	78.176	1.00	41.83	C
ATOM	6102	CG	MET D 357	34.132	28.202	78.315	1.00	40.99	C
ATOM	6103	SD	MET D 357	34.234	29.774	79.153	1.00	42.14	S
ATOM	6104	CE	MET D 357	34.653	29.240	80.819	1.00	42.38	C
ATOM	6105	N	ILE D 358	35.905	27.296	75.206	1.00	40.92	N
ATOM	6106	CA	ILE D 358	35.618	27.703	73.852	1.00	40.82	C
ATOM	6107	C	ILE D 358	35.088	26.509	73.082	1.00	42.56	C
ATOM	6108	O	ILE D 358	34.088	26.641	72.391	1.00	43.58	O
ATOM	6109	CB	ILE D 358	36.884	28.228	73.142	1.00	39.59	C
ATOM	6110	CG1	ILE D 358	37.398	29.499	73.829	1.00	39.34	C
ATOM	6111	CG2	ILE D 358	36.613	28.503	71.697	1.00	37.65	C
ATOM	6112	CD1	ILE D 358	38.667	30.064	73.264	1.00	37.60	C
ATOM	6113	N	ASN D 359	35.726	25.354	73.180	1.00	44.35	N
ATOM	6114	CA	ASN D 359	35.250	24.164	72.492	1.00	46.30	C
ATOM	6115	C	ASN D 359	33.843	23.838	72.928	1.00	45.64	C
ATOM	6116	O	ASN D 359	32.962	23.631	72.124	1.00	47.13	O
ATOM	6117	CB	ASN D 359	36.155	22.978	72.842	1.00	51.34	C
ATOM	6118	CG	ASN D 359	37.410	23.123	72.004	1.00	55.99	C
ATOM	6119	OD1	ASN D 359	37.180	23.150	70.781	1.00	60.17	O
ATOM	6120	ND2	ASN D 359	38.629	23.238	72.519	1.00	57.16	N
ATOM	6121	N	TRP D 360	33.592	23.787	74.225	1.00	44.26	N
ATOM	6122	CA	TRP D 360	32.296	23.479	74.769	1.00	41.88	C
ATOM	6123	C	TRP D 360	31.234	24.400	74.223	1.00	41.73	C
ATOM	6124	O	TRP D 360	30.110	24.054	73.906	1.00	40.64	O
ATOM	6125	CB	TRP D 360	32.435	23.694	76.275	1.00	41.45	C
ATOM	6126	CG	TRP D 360	31.082	23.808	76.915	1.00	41.81	C
ATOM	6127	CD1	TRP D 360	30.221	22.791	77.184	1.00	41.25	C
ATOM	6128	CD2	TRP D 360	30.441	25.022	77.348	1.00	41.31	C
ATOM	6129	NE1	TRP D 360	29.095	23.305	77.750	1.00	41.05	N
ATOM	6130	CE2	TRP D 360	29.198	24.657	77.871	1.00	40.99	C
ATOM	6131	CE3	TRP D 360	30.812	26.369	77.330	1.00	40.72	C
ATOM	6132	CZ2	TRP D 360	28.311	25.581	78.398	1.00	41.54	C
ATOM	6133	CZ3	TRP D 360	29.928	27.279	77.843	1.00	41.39	C
ATOM	6134	CH2	TRP D 360	28.691	26.888	78.374	1.00	41.92	C
ATOM	6135	N	ALA D 361	31.562	25.689	74.162	1.00	43.48	N
ATOM	6136	CA	ALA D 361	30.634	26.720	73.713	1.00	43.83	C
ATOM	6137	C	ALA D 361	30.132	26.330	72.341	1.00	45.28	C
ATOM	6138	O	ALA D 361	28.942	26.476	72.114	1.00	46.11	O
ATOM	6139	CB	ALA D 361	31.264	28.101	73.696	1.00	42.45	C
ATOM	6140	N	LYS D 362	30.980	25.849	71.446	1.00	46.93	N
ATOM	6141	CA	LYS D 362	30.618	25.471	70.112	1.00	48.98	C
ATOM	6142	C	LYS D 362	29.581	24.390	70.069	1.00	50.09	C
ATOM	6143	O	LYS D 362	28.874	24.303	69.074	1.00	52.06	O
ATOM	6144	CB	LYS D 362	31.864	25.075	69.323	1.00	51.99	C
ATOM	6145	CG	LYS D 362	32.778	26.268	69.066	1.00	56.03	C

ATOM	6146	CD	LYS D 362	32.135	27.218	68.051	1.00	60.32	C
ATOM	6147	CE	LYS D 362	33.091	27.700	66.948	1.00	62.47	C
ATOM	6148	NZ	LYS D 362	32.412	28.297	65.742	1.00	62.21	N
ATOM	6149	N	ARG D 363	29.375	23.554	71.047	1.00	51.12	N
ATOM	6150	CA	ARG D 363	28.374	22.527	71.110	1.00	52.21	C
ATOM	6151	C	ARG D 363	27.113	22.909	71.852	1.00	50.20	C
ATOM	6152	O	ARG D 363	26.246	22.058	71.973	1.00	51.12	O
ATOM	6153	CB	ARG D 363	28.935	21.320	71.868	1.00	56.54	C
ATOM	6154	CG	ARG D 363	30.449	21.450	71.987	1.00	62.78	C
ATOM	6155	CD	ARG D 363	31.016	20.809	70.713	1.00	68.87	C
ATOM	6156	NE	ARG D 363	30.663	19.376	70.831	1.00	74.34	N
ATOM	6157	CZ	ARG D 363	31.277	18.626	71.761	1.00	77.66	C
ATOM	6158	NH1	ARG D 363	32.203	19.186	72.544	1.00	78.42	N
ATOM	6159	NH2	ARG D 363	30.933	17.335	71.872	1.00	79.28	N
ATOM	6160	N	VAL D 364	26.934	24.079	72.396	1.00	48.90	N
ATOM	6161	CA	VAL D 364	25.685	24.397	73.104	1.00	47.37	C
ATOM	6162	C	VAL D 364	24.686	24.663	72.004	1.00	46.99	C
ATOM	6163	O	VAL D 364	24.855	25.578	71.218	1.00	47.63	O
ATOM	6164	CB	VAL D 364	25.869	25.635	74.003	1.00	45.65	C
ATOM	6165	CG1	VAL D 364	24.562	26.184	74.492	1.00	44.21	C
ATOM	6166	CG2	VAL D 364	26.780	25.277	75.152	1.00	46.04	C
ATOM	6167	N	PRO D 365	23.659	23.876	71.871	1.00	47.02	N
ATOM	6168	CA	PRO D 365	22.645	24.048	70.834	1.00	47.31	C
ATOM	6169	C	PRO D 365	22.264	25.497	70.636	1.00	47.53	C
ATOM	6170	O	PRO D 365	21.941	26.186	71.590	1.00	49.08	O
ATOM	6171	CB	PRO D 365	21.458	23.181	71.282	1.00	46.59	C
ATOM	6172	CG	PRO D 365	22.261	22.071	71.950	1.00	47.00	C
ATOM	6173	CD	PRO D 365	23.391	22.717	72.730	1.00	46.75	C
ATOM	6174	N	GLY D 366	22.317	26.019	69.422	1.00	47.41	N
ATOM	6175	CA	GLY D 366	21.964	27.385	69.106	1.00	46.04	C
ATOM	6176	C	GLY D 366	23.122	28.343	69.012	1.00	45.85	C
ATOM	6177	O	GLY D 366	23.086	29.339	68.291	1.00	46.68	O
ATOM	6178	N	PHE D 367	24.190	28.083	69.738	1.00	45.21	N
ATOM	6179	CA	PHE D 367	25.366	28.929	69.788	1.00	45.52	C
ATOM	6180	C	PHE D 367	25.976	29.319	68.453	1.00	45.11	C
ATOM	6181	O	PHE D 367	26.221	30.434	68.001	1.00	43.49	O
ATOM	6182	CB	PHE D 367	26.477	28.279	70.656	1.00	44.32	C
ATOM	6183	CG	PHE D 367	27.551	29.268	70.999	1.00	44.55	C
ATOM	6184	CD1	PHE D 367	27.363	30.300	71.898	1.00	44.50	C
ATOM	6185	CD2	PHE D 367	28.773	29.162	70.366	1.00	45.53	C
ATOM	6186	CE1	PHE D 367	28.369	31.197	72.186	1.00	45.11	C
ATOM	6187	CE2	PHE D 367	29.789	30.061	70.658	1.00	46.26	C
ATOM	6188	CZ	PHE D 367	29.604	31.087	71.571	1.00	45.31	C
ATOM	6189	N	VAL D 368	26.265	28.243	67.744	1.00	46.20	N
ATOM	6190	CA	VAL D 368	26.895	28.245	66.435	1.00	46.66	C

ATOM	6191	C	VAL D 368	26.082	28.975	65.399	1.00	48.08	C
ATOM	6192	O	VAL D 368	26.683	29.387	64.414	1.00	49.17	O
ATOM	6193	CB	VAL D 368	27.205	26.794	66.072	1.00	44.95	C
ATOM	6194	CG1	VAL D 368	26.824	26.469	64.664	1.00	45.34	C
ATOM	6195	CG2	VAL D 368	28.671	26.585	66.384	1.00	44.85	C
ATOM	6196	N	ASP D 369	24.787	29.165	65.593	1.00	48.90	N
ATOM	6197	CA	ASP D 369	23.954	29.913	64.698	1.00	48.81	C
ATOM	6198	C	ASP D 369	24.220	31.395	64.840	1.00	46.53	C
ATOM	6199	O	ASP D 369	23.595	32.145	64.116	1.00	47.73	O
ATOM	6200	CB	ASP D 369	22.469	29.720	65.013	1.00	52.83	C
ATOM	6201	CG	ASP D 369	22.039	28.271	64.957	1.00	57.29	C
ATOM	6202	OD1	ASP D 369	22.549	27.486	64.111	1.00	59.44	O
ATOM	6203	OD2	ASP D 369	21.160	27.927	65.791	1.00	59.35	O
ATOM	6204	N	LEU D 370	25.002	31.928	65.736	1.00	45.83	N
ATOM	6205	CA	LEU D 370	25.214	33.375	65.852	1.00	44.35	C
ATOM	6206	C	LEU D 370	26.392	33.803	65.001	1.00	43.01	C
ATOM	6207	O	LEU D 370	27.198	32.950	64.652	1.00	43.42	O
ATOM	6208	CB	LEU D 370	25.482	33.706	67.325	1.00	44.43	C
ATOM	6209	CG	LEU D 370	24.324	33.418	68.273	1.00	44.60	C
ATOM	6210	CD1	LEU D 370	24.659	33.719	69.717	1.00	45.19	C
ATOM	6211	CD2	LEU D 370	23.174	34.327	67.868	1.00	45.07	C
ATOM	6212	N	THR D 371	26.573	35.055	64.634	1.00	41.97	N
ATOM	6213	CA	THR D 371	27.740	35.393	63.833	1.00	41.89	C
ATOM	6214	C	THR D 371	28.996	35.122	64.629	1.00	42.57	C
ATOM	6215	O	THR D 371	29.066	35.192	65.842	1.00	42.44	O
ATOM	6216	CB	THR D 371	27.753	36.867	63.472	1.00	42.11	C
ATOM	6217	OG1	THR D 371	27.590	37.524	64.730	1.00	44.12	O
ATOM	6218	CG2	THR D 371	26.588	37.224	62.583	1.00	42.85	C
ATOM	6219	N	LEU D 372	30.084	34.819	63.921	1.00	44.42	N
ATOM	6220	CA	LEU D 372	31.352	34.525	64.582	1.00	44.22	C
ATOM	6221	C	LEU D 372	31.684	35.588	65.615	1.00	45.55	C
ATOM	6222	O	LEU D 372	32.135	35.219	66.713	1.00	46.54	O
ATOM	6223	CB	LEU D 372	32.400	34.370	63.500	1.00	43.22	C
ATOM	6224	CG	LEU D 372	32.274	33.164	62.587	1.00	42.31	C
ATOM	6225	CD1	LEU D 372	33.405	33.206	61.575	1.00	42.37	C
ATOM	6226	CD2	LEU D 372	32.422	31.864	63.359	1.00	43.20	C
ATOM	6227	N	HIS D 373	31.476	36.879	65.357	1.00	45.87	N
ATOM	6228	CA	HIS D 373	31.821	37.871	66.364	1.00	46.42	C
ATOM	6229	C	HIS D 373	30.894	37.785	67.553	1.00	45.97	C
ATOM	6230	O	HIS D 373	31.376	37.912	68.685	1.00	45.63	O
ATOM	6231	CB	HIS D 373	31.928	39.239	65.738	1.00	48.92	C
ATOM	6232	CG	HIS D 373	33.222	39.415	64.998	1.00	52.20	C
ATOM	6233	ND1	HIS D 373	33.327	39.410	63.612	1.00	54.08	N
ATOM	6234	CD2	HIS D 373	34.483	39.619	65.412	1.00	52.17	C
ATOM	6235	CE1	HIS D 373	34.585	39.608	63.254	1.00	53.36	C

ATOM	6236	NE2 HIS D 373	35.316	39.724	64.342	1.00	53.01	N
ATOM	6237	N ASP D 374	29.609	37.532	67.376	1.00	45.27	N
ATOM	6238	CA ASP D 374	28.727	37.420	68.537	1.00	44.31	C
ATOM	6239	C ASP D 374	29.131	36.231	69.365	1.00	44.76	C
ATOM	6240	O ASP D 374	29.020	36.321	70.602	1.00	46.57	O
ATOM	6241	CB ASP D 374	27.270	37.375	68.101	1.00	45.70	C
ATOM	6242	CG ASP D 374	26.960	38.785	67.606	1.00	47.92	C
ATOM	6243	OD1 ASP D 374	27.825	39.630	67.959	1.00	48.20	O
ATOM	6244	OD2 ASP D 374	25.934	39.054	66.942	1.00	49.23	O
ATOM	6245	N GLND 375	29.621	35.138	68.767	1.00	43.46	N
ATOM	6246	CA GLND 375	30.065	34.043	69.632	1.00	43.24	C
ATOM	6247	C GLND 375	31.182	34.570	70.519	1.00	43.49	C
ATOM	6248	O GLND 375	31.103	34.491	71.751	1.00	43.99	O
ATOM	6249	CB GLND 375	30.487	32.892	68.772	1.00	43.33	C
ATOM	6250	CG GLND 375	29.295	32.393	67.967	1.00	45.33	C
ATOM	6251	CD GLND 375	29.728	31.298	66.999	1.00	46.27	C
ATOM	6252	OE1 GLND 375	30.645	30.507	67.258	1.00	46.47	O
ATOM	6253	NE2 GLND 375	29.046	31.272	65.868	1.00	45.99	N
ATOM	6254	N VAL D 376	32.209	35.174	69.923	1.00	43.17	N
ATOM	6255	CA VAL D 376	33.298	35.734	70.732	1.00	43.08	C
ATOM	6256	C VAL D 376	32.735	36.638	71.823	1.00	43.18	C
ATOM	6257	O VAL D 376	33.129	36.537	72.992	1.00	43.07	O
ATOM	6258	CB VAL D 376	34.352	36.477	69.888	1.00	43.20	C
ATOM	6259	CG1 VAL D 376	35.593	36.613	70.762	1.00	43.38	C
ATOM	6260	CG2 VAL D 376	34.722	35.740	68.608	1.00	41.91	C
ATOM	6261	N HIS D 377	31.799	37.527	71.498	1.00	43.48	N
ATOM	6262	CA HIS D 377	31.183	38.405	72.486	1.00	42.95	C
ATOM	6263	C HIS D 377	30.579	37.591	73.589	1.00	41.48	C
ATOM	6264	O HIS D 377	31.054	37.740	74.725	1.00	41.73	O
ATOM	6265	CB HIS D 377	30.205	39.382	71.862	1.00	44.67	C
ATOM	6266	CG AHIS D 377	29.459	40.289	72.768	0.50	42.77	C
ATOM	6267	CG BHIS D 377	30.969	40.454	71.113	0.50	48.17	C
ATOM	6268	ND1AHIS D 377	30.072	41.354	73.384	0.50	42.79	N
ATOM	6269	ND1BHIS D 377	30.786	40.698	69.761	0.50	49.01	N
ATOM	6270	CD2AHIS D 377	28.172	40.313	73.164	0.50	42.72	C
ATOM	6271	CD2BHIS D 377	31.924	41.334	71.516	0.50	48.93	C
ATOM	6272	CE1AHIS D 377	29.195	41.996	74.131	0.50	42.72	C
ATOM	6273	CE1BHIS D 377	31.585	41.681	69.367	0.50	49.03	C
ATOM	6274	NE2AHIS D 377	28.036	41.382	74.017	0.50	42.72	N
ATOM	6275	NE2BHIS D 377	32.286	42.088	70.407	0.50	49.35	N
ATOM	6276	N LEU D 378	29.644	36.688	73.379	1.00	41.46	N
ATOM	6277	CA LEU D 378	29.127	35.924	74.557	1.00	41.07	C
ATOM	6278	C LEU D 378	30.244	35.300	75.378	1.00	39.80	C
ATOM	6279	O LEU D 378	30.278	35.293	76.608	1.00	39.33	O
ATOM	6280	CB LEU D 378	28.079	34.913	74.092	1.00	40.58	C

ATOM	6281	CG LEU D 378	26.947	35.482	73.233	1.00	40.01	C
ATOM	6282	CD1 LEU D 378	25.938	34.407	72.906	1.00	39.46	C
ATOM	6283	CD2 LEU D 378	26.289	36.641	73.989	1.00	40.25	C
ATOM	6284	N LEU D 379	31.256	34.725	74.740	1.00	39.51	N
ATOM	6285	CA LEU D 379	32.366	34.132	75.452	1.00	38.70	C
ATOM	6286	C LEU D 379	33.070	35.171	76.293	1.00	38.95	C
ATOM	6287	O LEU D 379	33.112	35.019	77.509	1.00	37.69	O
ATOM	6288	CB LEU D 379	33.333	33.515	74.462	1.00	38.77	C
ATOM	6289	CG LEU D 379	32.984	32.035	74.273	1.00	39.28	C
ATOM	6290	CD1 LEU D 379	33.914	31.556	73.159	1.00	40.30	C
ATOM	6291	CD2 LEU D 379	33.061	31.264	75.581	1.00	37.03	C
ATOM	6292	N GLU D 380	33.544	36.240	75.642	1.00	40.00	N
ATOM	6293	CA GLU D 380	34.189	37.305	76.416	1.00	41.67	C
ATOM	6294	C GLU D 380	33.284	37.785	77.545	1.00	43.10	C
ATOM	6295	O GLU D 380	33.718	38.049	78.653	1.00	43.41	O
ATOM	6296	CB GLU D 380	34.498	38.490	75.530	1.00	40.94	C
ATOM	6297	CG GLU D 380	35.532	38.158	74.456	1.00	43.88	C
ATOM	6298	CD GLU D 380	35.639	39.372	73.551	1.00	46.53	C
ATOM	6299	OE1 GLU D 380	34.609	40.105	73.396	1.00	48.71	O
ATOM	6300	OE2 GLU D 380	36.732	39.604	73.006	1.00	47.01	O
ATOM	6301	N CYS D 381	31.981	37.920	77.295	1.00	44.81	N
ATOM	6302	CA CYS D 381	31.112	38.377	78.341	1.00	46.63	C
ATOM	6303	C CYS D 381	30.987	37.415	79.488	1.00	43.56	C
ATOM	6304	O CYS D 381	31.118	37.898	80.604	1.00	42.78	O
ATOM	6305	CB CYS D 381	29.761	38.864	77.771	1.00	50.78	C
ATOM	6306	SG CYS D 381	29.626	40.658	78.224	1.00	63.43	S
ATOM	6307	N ALA D 382	30.743	36.138	79.292	1.00	41.65	N
ATOM	6308	CA ALA D 382	30.518	35.213	80.385	1.00	40.09	C
ATOM	6309	C ALA D 382	31.613	34.307	80.877	1.00	39.58	C
ATOM	6310	O ALA D 382	31.352	33.505	81.778	1.00	39.62	O
ATOM	6311	CB ALA D 382	29.399	34.303	79.819	1.00	38.89	C
ATOM	6312	N TRP D 383	32.834	34.376	80.378	1.00	39.40	N
ATOM	6313	CA TRP D 383	33.896	33.455	80.771	1.00	38.01	C
ATOM	6314	C TRP D 383	34.029	33.173	82.253	1.00	37.84	C
ATOM	6315	O TRP D 383	33.935	32.027	82.709	1.00	36.52	O
ATOM	6316	CB TRP D 383	35.185	33.887	80.105	1.00	36.76	C
ATOM	6317	CG TRP D 383	35.874	35.059	80.689	1.00	35.63	C
ATOM	6318	CD1 TRP D 383	35.744	36.370	80.365	1.00	35.20	C
ATOM	6319	CD2 TRP D 383	36.869	34.994	81.718	1.00	35.85	C
ATOM	6320	NE1 TRP D 383	36.573	37.127	81.145	1.00	34.93	N
ATOM	6321	CE2 TRP D 383	37.275	36.306	81.987	1.00	35.35	C
ATOM	6322	CE3 TRP D 383	37.415	33.946	82.467	1.00	36.43	C
ATOM	6323	CZ2 TRP D 383	38.222	36.578	82.953	1.00	35.70	C
ATOM	6324	CZ3 TRP D 383	38.348	34.254	83.432	1.00	35.86	C
ATOM	6325	CH2 TRP D 383	38.756	35.549	83.663	1.00	35.16	C

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ATOM	6326	N	LEUD 384	34.204	34.232	83.045	1.00	37.07	N
ATOM	6327	CA	LEUD 384	34.361	34.073	84.485	1.00	34.29	C
ATOM	6328	C	LEUD 384	33.083	33.572	85.091	1.00	34.07	C
ATOM	6329	O	LEUD 384	33.133	32.783	86.024	1.00	35.02	O
ATOM	6330	CB	LEUD 384	34.950	35.349	85.060	1.00	33.01	C
ATOM	6331	CG	LEUD 384	35.310	35.329	86.535	1.00	34.01	C
ATOM	6332	CD1	LEUD 384	36.154	34.136	86.972	1.00	34.20	C
ATOM	6333	CD2	LEUD 384	36.009	36.630	86.889	1.00	33.55	C
ATOM	6334	N	GLUD 385	31.886	33.919	84.644	1.00	35.06	N
ATOM	6335	CA	GLUD 385	30.648	33.411	85.242	1.00	34.10	C
ATOM	6336	C	GLUD 385	30.672	31.900	85.031	1.00	33.61	C
ATOM	6337	O	GLUD 385	30.488	31.121	85.955	1.00	32.47	O
ATOM	6338	CB	GLUD 385	29.414	34.058	84.678	1.00	34.46	C
ATOM	6339	CG	GLUD 385	28.899	35.317	85.300	1.00	36.30	C
ATOM	6340	CD	GLUD 385	27.712	35.900	84.551	1.00	39.20	C
ATOM	6341	OE1	GLUD 385	27.989	36.563	83.508	1.00	38.66	O
ATOM	6342	OE2	GLUD 385	26.516	35.719	84.973	1.00	40.99	O
ATOM	6343	N	ILED 386	30.940	31.453	83.816	1.00	34.27	N
ATOM	6344	CA	ILED 386	31.023	30.042	83.501	1.00	35.57	C
ATOM	6345	C	ILED 386	32.051	29.353	84.403	1.00	36.46	C
ATOM	6346	O	ILED 386	31.753	28.302	84.965	1.00	36.26	O
ATOM	6347	CB	ILED 386	31.462	29.651	82.087	1.00	36.16	C
ATOM	6348	CG1	ILED 386	30.810	30.376	80.921	1.00	38.67	C
ATOM	6349	CG2	ILED 386	31.205	28.173	81.927	1.00	35.09	C
ATOM	6350	CD1	ILED 386	29.305	30.310	80.872	1.00	40.67	C
ATOM	6351	N	LEUD 387	33.274	29.877	84.553	1.00	37.57	N
ATOM	6352	CA	LEUD 387	34.268	29.247	85.404	1.00	36.90	C
ATOM	6353	C	LEUD 387	33.732	29.174	86.831	1.00	38.44	C
ATOM	6354	O	LEUD 387	33.820	28.105	87.468	1.00	40.27	O
ATOM	6355	CB	LEUD 387	35.591	29.959	85.496	1.00	36.96	C
ATOM	6356	CG	LEUD 387	36.524	29.891	84.290	1.00	38.44	C
ATOM	6357	CD1	LEUD 387	37.742	30.803	84.456	1.00	38.18	C
ATOM	6358	CD2	LEUD 387	36.933	28.455	84.054	1.00	38.32	C
ATOM	6359	N	MET D 388	33.149	30.263	87.336	1.00	37.63	N
ATOM	6360	CA	MET D 388	32.665	30.221	88.705	1.00	37.22	C
ATOM	6361	C	MET D 388	31.539	29.252	88.906	1.00	38.19	C
ATOM	6362	O	MET D 388	31.511	28.579	89.929	1.00	38.89	O
ATOM	6363	CB	MET D 388	32.289	31.562	89.280	1.00	37.31	C
ATOM	6364	CG	MET D 388	33.246	32.708	89.036	1.00	38.43	C
ATOM	6365	SD	MET D 388	32.935	34.095	90.117	1.00	39.57	S
ATOM	6366	CE	MET D 388	34.516	34.928	90.147	1.00	40.10	C
ATOM	6367	N	ILED 389	30.574	29.104	88.001	1.00	40.64	N
ATOM	6368	CA	ILED 389	29.485	28.137	88.321	1.00	40.84	C
ATOM	6369	C	ILED 389	30.064	26.730	88.304	1.00	41.99	C
ATOM	6370	O	ILED 389	29.640	25.844	89.053	1.00	43.43	O

ATOM	6371	CB	ILE D 389	28.247	28.326	87.427	1.00	37.94	C
ATOM	6372	CG1	ILE D 389	27.068	27.488	87.908	1.00	36.69	C
ATOM	6373	CG2	ILE D 389	28.622	27.941	86.030	1.00	36.39	C
ATOM	6374	CD1	ILE D 389	25.732	27.888	87.384	1.00	34.40	C
ATOM	6375	N	GLY D 390	31.076	26.487	87.474	1.00	41.93	N
ATOM	6376	CA	GLY D 390	31.680	25.159	87.421	1.00	42.20	C
ATOM	6377	C	GLY D 390	32.294	24.860	88.770	1.00	42.14	C
ATOM	6378	O	GLY D 390	32.038	23.806	89.321	1.00	41.64	O
ATOM	6379	N	LEU D 391	33.068	25.848	89.246	1.00	42.56	N
ATOM	6380	CA	LEU D 391	33.741	25.678	90.541	1.00	41.55	C
ATOM	6381	C	LEU D 391	32.731	25.332	91.599	1.00	41.30	C
ATOM	6382	O	LEU D 391	32.765	24.333	92.268	1.00	42.41	O
ATOM	6383	CB	LEU D 391	34.471	26.946	90.967	1.00	40.77	C
ATOM	6384	CG	LEU D 391	35.090	27.007	92.349	1.00	41.23	C
ATOM	6385	CD1	LEU D 391	36.095	25.868	92.543	1.00	41.69	C
ATOM	6386	CD2	LEU D 391	35.784	28.323	92.643	1.00	41.15	C
ATOM	6387	N	VAL D 392	31.757	26.194	91.775	1.00	42.54	N
ATOM	6388	CA	VAL D 392	30.712	26.047	92.770	1.00	42.50	C
ATOM	6389	C	VAL D 392	30.087	24.673	92.725	1.00	44.06	C
ATOM	6390	O	VAL D 392	29.878	24.012	93.738	1.00	44.87	O
ATOM	6391	CB	VAL D 392	29.661	27.150	92.609	1.00	41.04	C
ATOM	6392	CG1	VAL D 392	28.457	26.838	93.465	1.00	40.61	C
ATOM	6393	CG2	VAL D 392	30.233	28.468	93.091	1.00	40.68	C
ATOM	6394	N	TRP D 393	29.749	24.233	91.530	1.00	45.63	N
ATOM	6395	CA	TRP D 393	29.106	22.954	91.287	1.00	46.45	C
ATOM	6396	C	TRP D 393	29.993	21.800	91.697	1.00	46.87	C
ATOM	6397	O	TRP D 393	29.499	20.900	92.357	1.00	47.71	O
ATOM	6398	CB	TRP D 393	28.821	22.832	89.788	1.00	47.26	C
ATOM	6399	CG	TRP D 393	28.626	21.413	89.360	1.00	47.45	C
ATOM	6400	CD1	TRP D 393	29.474	20.649	88.625	1.00	47.21	C
ATOM	6401	CD2	TRP D 393	27.495	20.592	89.658	1.00	47.89	C
ATOM	6402	NE1	TRP D 393	28.934	19.407	88.437	1.00	47.18	N
ATOM	6403	CE2	TRP D 393	27.722	19.336	89.057	1.00	47.38	C
ATOM	6404	CE3	TRP D 393	26.314	20.800	90.373	1.00	48.23	C
ATOM	6405	CZ2	TRP D 393	26.821	18.281	89.148	1.00	47.14	C
ATOM	6406	CZ3	TRP D 393	25.423	19.753	90.471	1.00	48.58	C
ATOM	6407	CH2	TRP D 393	25.683	18.514	89.859	1.00	48.15	C
ATOM	6408	N	ARG D 394	31.261	21.843	91.276	1.00	47.26	N
ATOM	6409	CA	ARG D 394	32.153	20.755	91.647	1.00	47.47	C
ATOM	6410	C	ARG D 394	32.522	20.880	93.110	1.00	48.85	C
ATOM	6411	O	ARG D 394	32.965	19.910	93.710	1.00	51.34	O
ATOM	6412	CB	ARG D 394	33.346	20.565	90.751	1.00	45.88	C
ATOM	6413	CG	ARG D 394	34.195	21.670	90.285	1.00	45.23	C
ATOM	6414	CD	ARG D 394	35.404	21.219	89.472	1.00	44.56	C
ATOM	6415	NE	ARG D 394	36.333	22.366	89.420	1.00	44.88	N

ATOM	6416	CZ	ARG D 394	36.199	23.404	88.581	1.00	43.91	C
ATOM	6417	NH1	ARG D 394	35.178	23.385	87.723	1.00	42.96	N
ATOM	6418	NH2	ARG D 394	37.080	24.394	88.648	1.00	42.79	N
ATOM	6419	N	SER D 395	32.320	21.987	93.784	1.00	49.90	N
ATOM	6420	CA	SER D 395	32.664	22.157	95.176	1.00	50.13	C
ATOM	6421	C	SER D 395	31.537	21.806	96.107	1.00	52.01	C
ATOM	6422	O	SER D 395	31.728	21.905	97.305	1.00	51.77	O
ATOM	6423	CB	SER D 395	33.010	23.638	95.389	1.00	48.88	C
ATOM	6424	OG	SER D 395	34.328	23.883	95.041	1.00	48.12	O
ATOM	6425	N	MET D 396	30.372	21.474	95.604	1.00	55.73	N
ATOM	6426	CA	MET D 396	29.191	21.154	96.379	1.00	58.93	C
ATOM	6427	C	MET D 396	29.350	20.214	97.562	1.00	61.21	C
ATOM	6428	O	MET D 396	29.035	20.554	98.703	1.00	60.74	O
ATOM	6429	CB	MET D 396	28.162	20.480	95.469	1.00	58.99	C
ATOM	6430	CG	MET D 396	26.798	21.123	95.513	1.00	59.94	C
ATOM	6431	SD	MET D 396	25.938	20.861	93.929	1.00	61.60	S
ATOM	6432	CE	MET D 396	24.591	19.810	94.466	1.00	62.02	C
ATOM	6433	N	GLU D 397	29.846	19.015	97.307	1.00	64.29	N
ATOM	6434	CA	GLU D 397	30.015	18.034	98.350	1.00	68.31	C
ATOM	6435	C	GLU D 397	31.265	18.211	99.150	1.00	67.09	C
ATOM	6436	O	GLU D 397	31.861	17.196	99.553	1.00	68.52	O
ATOM	6437	CB	GLU D 397	30.078	16.601	97.812	1.00	74.13	C
ATOM	6438	CG	GLU D 397	28.992	16.250	96.808	1.00	81.18	C
ATOM	6439	CD	GLU D 397	29.392	16.854	95.465	1.00	85.51	C
ATOM	6440	OE1	GLU D 397	30.601	17.197	95.348	1.00	86.84	O
ATOM	6441	OE2	GLU D 397	28.507	17.003	94.580	1.00	89.02	O
ATOM	6442	N	HIS D 398	31.838	19.374	99.349	1.00	65.05	N
ATOM	6443	CA	HIS D 398	33.038	19.570	100.143	1.00	63.44	C
ATOM	6444	C	HIS D 398	32.745	20.856	100.903	1.00	62.33	C
ATOM	6445	O	HIS D 398	33.332	21.881	100.596	1.00	63.98	O
ATOM	6446	CB	HIS D 398	34.312	19.691	99.356	1.00	64.27	C
ATOM	6447	CG	HIS D 398	34.697	18.474	98.586	1.00	66.27	C
ATOM	6448	ND1	HIS D 398	33.816	17.929	97.678	1.00	66.86	N
ATOM	6449	CD2	HIS D 398	35.806	17.697	98.518	1.00	67.14	C
ATOM	6450	CE1	HIS D 398	34.317	16.872	97.085	1.00	67.53	C
ATOM	6451	NE2	HIS D 398	35.539	16.722	97.579	1.00	68.06	N
ATOM	6452	N	PRO D 399	31.821	20.784	101.832	1.00	60.72	N
ATOM	6453	CA	PRO D 399	31.359	21.897	102.629	1.00	59.62	C
ATOM	6454	C	PRO D 399	32.519	22.687	103.173	1.00	59.50	C
ATOM	6455	O	PRO D 399	33.481	22.072	103.650	1.00	61.25	O
ATOM	6456	CB	PRO D 399	30.513	21.354	103.781	1.00	59.58	C
ATOM	6457	CG	PRO D 399	30.057	20.058	103.175	1.00	60.98	C
ATOM	6458	CD	PRO D 399	31.100	19.570	102.206	1.00	60.87	C
ATOM	6459	N	GLY D 400	32.465	24.004	103.044	1.00	57.70	N
ATOM	6460	CA	GLY D 400	33.537	24.830	103.541	1.00	56.92	C

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ATOM 6461 C GLY D 400	34.787	24.865	102.689	1.00	56.74	C
ATOM 6462 O GLY D 400	35.733	25.606	103.049	1.00	57.61	O
ATOM 6463 N LYS D 401	34.827	24.116	101.596	1.00	55.26	N
ATOM 6464 CA LYS D 401	35.988	24.084	100.747	1.00	55.15	C
ATOM 6465 C LYS D 401	35.619	24.315	99.276	1.00	54.36	C
ATOM 6466 O LYS D 401	34.456	24.152	98.883	1.00	53.30	O
ATOM 6467 CB LYS D 401	36.607	22.703	100.773	1.00	57.46	C
ATOM 6468 CG LYS D 401	36.857	22.055	102.095	1.00	60.83	C
ATOM 6469 CD LYS D 401	38.357	21.996	102.346	1.00	64.64	C
ATOM 6470 CE LYS D 401	38.622	21.658	103.805	1.00	67.58	C
ATOM 6471 NZ LYS D 401	37.772	20.479	104.196	1.00	70.44	N
ATOM 6472 N LEU D 402	36.677	24.687	98.529	1.00	51.63	N
ATOM 6473 CA LEU D 402	36.481	24.885	97.108	1.00	49.28	C
ATOM 6474 C LEU D 402	37.432	23.955	96.365	1.00	48.72	C
ATOM 6475 O LEU D 402	38.646	24.038	96.510	1.00	49.51	O
ATOM 6476 CB LEU D 402	36.691	26.311	96.652	1.00	48.95	C
ATOM 6477 CG LEU D 402	35.857	27.437	97.251	1.00	48.74	C
ATOM 6478 CD1 LEU D 402	36.524	28.796	97.010	1.00	48.73	C
ATOM 6479 CD2 LEU D 402	34.438	27.390	96.713	1.00	47.64	C
ATOM 6480 N LEU D 403	36.886	23.079	95.559	1.00	47.56	N
ATOM 6481 CA LEU D 403	37.661	22.157	94.763	1.00	47.51	C
ATOM 6482 C LEU D 403	38.046	22.737	93.418	1.00	47.68	C
ATOM 6483 O LEU D 403	37.391	22.436	92.405	1.00	48.52	O
ATOM 6484 CB LEU D 403	36.733	20.948	94.527	1.00	48.78	C
ATOM 6485 CG LEU D 403	37.468	19.675	94.109	1.00	49.22	C
ATOM 6486 CD1 LEU D 403	37.960	18.999	95.365	1.00	49.67	C
ATOM 6487 CD2 LEU D 403	36.624	18.756	93.259	1.00	48.96	C
ATOM 6488 N PHE D 404	39.100	23.533	93.300	1.00	46.77	N
ATOM 6489 CA PHE D 404	39.468	24.057	91.990	1.00	46.19	C
ATOM 6490 C PHE D 404	39.733	22.892	91.068	1.00	47.69	C
ATOM 6491 O PHE D 404	39.366	22.906	89.903	1.00	48.97	O
ATOM 6492 CB PHE D 404	40.670	24.998	92.034	1.00	45.47	C
ATOM 6493 CG PHE D 404	40.214	26.288	92.661	1.00	45.16	C
ATOM 6494 CD1 PHE D 404	40.200	26.430	94.033	1.00	44.79	C
ATOM 6495 CD2 PHE D 404	39.788	27.331	91.850	1.00	45.19	C
ATOM 6496 CE1 PHE D 404	39.754	27.624	94.587	1.00	45.59	C
ATOM 6497 CE2 PHE D 404	39.349	28.521	92.385	1.00	44.20	C
ATOM 6498 CZ PHE D 404	39.339	28.659	93.752	1.00	45.30	C
ATOM 6499 N ALA D 405	40.410	21.876	91.548	1.00	50.13	N
ATOM 6500 CA ALA D 405	40.730	20.666	90.804	1.00	52.20	C
ATOM 6501 C ALA D 405	40.531	19.461	91.705	1.00	53.17	C
ATOM 6502 O ALA D 405	40.430	19.522	92.927	1.00	54.84	O
ATOM 6503 CB ALA D 405	42.170	20.689	90.327	1.00	51.92	C
ATOM 6504 N PRO D 406	40.555	18.288	91.120	1.00	53.68	N
ATOM 6505 CA PRO D 406	40.455	17.023	91.830	1.00	53.61	C

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ATOM 6506 C PRO D 406	41.649 17.004 92.777 1.00 54.39	C
ATOM 6507 O PRO D 406	41.444 16.490 93.860 1.00 56.81	O
ATOM 6508 CB PRO D 406	40.521 15.891 90.808 1.00 53.28	C
ATOM 6509 CG PRO D 406	40.346 16.616 89.511 1.00 53.32	C
ATOM 6510 CD PRO D 406	40.743 18.070 89.684 1.00 54.19	C
ATOM 6511 N ASN D 407	42.801 17.531 92.398 1.00 53.35	N
ATOM 6512 CA ASN D 407	43.951 17.577 93.236 1.00 53.92	C
ATOM 6513 C ASN D 407	44.278 18.961 93.759 1.00 55.93	C
ATOM 6514 O ASN D 407	45.461 19.263 94.028 1.00 58.16	O
ATOM 6515 CB ASN D 407	45.079 17.006 92.383 1.00 54.30	C
ATOM 6516 CG ASN D 407	45.564 17.970 91.342 1.00 54.63	C
ATOM 6517 OD1 ASN D 407	44.772 18.617 90.708 1.00 54.53	O
ATOM 6518 ND2 ASN D 407	46.870 18.077 91.169 1.00 57.13	N
ATOM 6519 N LEU D 408	43.320 19.873 93.900 1.00 55.89	N
ATOM 6520 CA LEU D 408	43.601 21.230 94.408 1.00 54.93	C
ATOM 6521 C LEU D 408	42.307 21.584 95.138 1.00 55.30	C
ATOM 6522 O LEU D 408	41.306 21.854 94.501 1.00 54.97	O
ATOM 6523 CB LEU D 408	43.968 22.297 93.414 1.00 54.10	C
ATOM 6524 CG LEU D 408	44.225 23.714 93.898 1.00 54.18	C
ATOM 6525 CD1 LEU D 408	45.153 23.760 95.105 1.00 53.84	C
ATOM 6526 CD2 LEU D 408	44.807 24.546 92.745 1.00 53.64	C
ATOM 6527 N LEU D 409	42.355 21.478 96.464 1.00 56.22	N
ATOM 6528 CA LEU D 409	41.152 21.729 97.268 1.00 55.14	C
ATOM 6529 C LEU D 409	41.443 22.770 98.317 1.00 55.47	C
ATOM 6530 O LEU D 409	41.823 22.462 99.442 1.00 57.57	O
ATOM 6531 CB LEU D 409	40.769 20.366 97.801 1.00 54.10	C
ATOM 6532 CG LEU D 409	39.635 20.138 98.762 1.00 54.26	C
ATOM 6533 CD1 LEU D 409	38.452 21.061 98.608 1.00 54.23	C
ATOM 6534 CD2 LEU D 409	39.118 18.710 98.542 1.00 55.33	C
ATOM 6535 N LEU D 410	41.323 24.045 97.996 1.00 55.80	N
ATOM 6536 CA LEU D 410	41.596 25.095 98.963 1.00 56.04	C
ATOM 6537 C LEU D 410	40.411 25.166 99.914 1.00 58.15	C
ATOM 6538 O LEU D 410	39.280 24.761 99.660 1.00 58.07	O
ATOM 6539 CB LEU D 410	41.934 26.433 98.332 1.00 54.82	C
ATOM 6540 CG LEU D 410	42.930 26.274 97.165 1.00 53.89	C
ATOM 6541 CD1 LEU D 410	43.178 27.583 96.458 1.00 54.38	C
ATOM 6542 CD2 LEU D 410	44.208 25.711 97.735 1.00 54.32	C
ATOM 6543 N ASP D 411	40.775 25.690 101.066 1.00 60.57	N
ATOM 6544 CA ASP D 411	39.873 25.851 102.194 1.00 63.28	C
ATOM 6545 C ASP D 411	39.639 27.330 102.396 1.00 63.04	C
ATOM 6546 O ASP D 411	40.497 28.143 102.070 1.00 62.61	O
ATOM 6547 CB ASP D 411	40.604 25.118 103.304 1.00 67.29	C
ATOM 6548 CG ASP D 411	40.349 25.738 104.655 1.00 71.89	C
ATOM 6549 OD1 ASP D 411	40.851 26.870 104.877 1.00 73.52	O
ATOM 6550 OD2 ASP D 411	39.629 25.053 105.439 1.00 74.78	O

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ATOM	6551	N	ARG D 412	38.494	27.741	102.930	1.00	63.55	N
ATOM	6552	CA	ARG D 412	38.229	29.162	103.094	1.00	64.11	C
ATOM	6553	C	ARG D 412	39.433	29.967	103.517	1.00	64.52	C
ATOM	6554	O	ARG D 412	39.857	30.907	102.870	1.00	64.90	O
ATOM	6555	CB	ARG D 412	37.079	29.463	104.062	1.00	63.96	C
ATOM	6556	CG	ARG D 412	37.108	30.912	104.491	1.00	63.44	C
ATOM	6557	CD	ARG D 412	35.800	31.339	105.099	1.00	64.59	C
ATOM	6558	NE	ARG D 412	35.713	32.805	105.166	1.00	65.59	N
ATOM	6559	CZ	ARG D 412	36.493	33.608	105.872	1.00	65.39	C
ATOM	6560	NH1	ARG D 412	37.476	33.125	106.616	1.00	66.19	N
ATOM	6561	NH2	ARG D 412	36.283	34.906	105.826	1.00	65.26	N
ATOM	6562	N	ASN D 413	40.021	29.649	104.640	1.00	66.66	N
ATOM	6563	CA	ASN D 413	41.162	30.381	105.167	1.00	69.28	C
ATOM	6564	C	ASN D 413	42.313	30.498	104.211	1.00	68.69	C
ATOM	6565	O	ASN D 413	43.022	31.512	104.293	1.00	69.64	O
ATOM	6566	CB	ASN D 413	41.585	29.698	106.472	1.00	73.23	C
ATOM	6567	CG	ASN D 413	40.296	29.643	107.304	1.00	76.86	C
ATOM	6568	OD1	ASN D 413	39.872	30.725	107.753	1.00	78.81	O
ATOM	6569	ND2	ASN D 413	39.770	28.420	107.423	1.00	77.58	N
ATOM	6570	N	GLN D 414	42.529	29.586	103.277	1.00	66.90	N
ATOM	6571	CA	GLN D 414	43.608	29.693	102.322	1.00	66.78	C
ATOM	6572	C	GLN D 414	43.380	30.879	101.391	1.00	66.42	C
ATOM	6573	O	GLN D 414	44.263	31.410	100.717	1.00	66.37	O
ATOM	6574	CB	GLN D 414	43.803	28.404	101.552	1.00	67.45	C
ATOM	6575	CG	GLN D 414	43.695	27.195	102.449	1.00	68.90	C
ATOM	6576	CD	GLN D 414	44.397	26.026	101.804	1.00	70.22	C
ATOM	6577	OE1	GLN D 414	43.804	24.989	101.524	1.00	71.97	O
ATOM	6578	NE2	GLN D 414	45.682	26.236	101.577	1.00	71.14	N
ATOM	6579	N	GLY D 415	42.157	31.367	101.358	1.00	66.04	N
ATOM	6580	CA	GLY D 415	41.785	32.540	100.605	1.00	66.54	C
ATOM	6581	C	GLY D 415	42.620	33.675	101.173	1.00	66.88	C
ATOM	6582	O	GLY D 415	43.196	34.437	100.408	1.00	66.87	O
ATOM	6583	N	LYS D 416	42.811	33.821	102.475	1.00	68.35	N
ATOM	6584	CA	LYS D 416	43.601	34.890	103.076	1.00	69.12	C
ATOM	6585	C	LYS D 416	45.008	35.036	102.516	1.00	68.34	C
ATOM	6586	O	LYS D 416	45.698	36.065	102.660	1.00	67.99	O
ATOM	6587	CB	LYS D 416	43.645	34.762	104.592	1.00	70.78	C
ATOM	6588	CG	LYS D 416	42.356	34.286	105.211	1.00	74.00	C
ATOM	6589	CD	LYS D 416	41.907	35.211	106.332	1.00	77.71	C
ATOM	6590	CE	LYS D 416	41.933	34.506	107.689	1.00	80.11	C
ATOM	6591	NZ	LYS D 416	40.660	33.764	107.958	1.00	81.48	N
ATOM	6592	N	CYS D 417	45.539	34.041	101.823	1.00	67.12	N
ATOM	6593	CA	CYS D 417	46.862	34.152	101.235	1.00	66.66	C
ATOM	6594	C	CYS D 417	46.875	35.293	100.244	1.00	64.77	C
ATOM	6595	O	CYS D 417	47.824	36.072	100.281	1.00	66.07	O

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ATOM	6596	CB	CYS D 417	47.262	32.815	100.634	1.00	68.39	C
ATOM	6597	SG	CYS D 417	47.427	31.592	101.951	1.00	73.49	S
ATOM	6598	N	VAL D 418	45.893	35.461	99.383	1.00	62.39	N
ATOM	6599	CA	VAL D 418	45.860	36.548	98.426	1.00	60.27	C
ATOM	6600	C	VAL D 418	44.980	37.688	98.902	1.00	61.04	C
ATOM	6601	O	VAL D 418	43.903	37.466	99.445	1.00	60.87	O
ATOM	6602	CB	VAL D 418	45.360	36.041	97.073	1.00	59.10	C
ATOM	6603	CG1	VAL D 418	45.183	37.173	96.080	1.00	58.79	C
ATOM	6604	CG2	VAL D 418	46.314	34.983	96.546	1.00	58.31	C
ATOM	6605	N	GLU D 419	45.428	38.912	98.712	1.00	62.71	N
ATOM	6606	CA	GLU D 419	44.716	40.116	99.093	1.00	65.35	C
ATOM	6607	C	GLU D 419	43.332	40.190	98.494	1.00	64.60	C
ATOM	6608	O	GLU D 419	43.065	39.945	97.322	1.00	65.26	O
ATOM	6609	CB	GLU D 419	45.537	41.284	98.568	1.00	70.24	C
ATOM	6610	CG	GLU D 419	45.668	42.507	99.451	1.00	76.95	C
ATOM	6611	CD	GLU D 419	46.113	43.758	98.685	1.00	81.24	C
ATOM	6612	OE1	GLU D 419	46.881	43.691	97.679	1.00	82.62	O
ATOM	6613	OE2	GLU D 419	45.696	44.889	99.073	1.00	83.42	O
ATOM	6614	N	GLY D 420	42.312	40.504	99.261	1.00	64.31	N
ATOM	6615	CA	GLY D 420	40.952	40.618	98.782	1.00	63.52	C
ATOM	6616	C	GLY D 420	40.278	39.372	98.291	1.00	62.66	C
ATOM	6617	O	GLY D 420	39.132	39.494	97.866	1.00	63.85	O
ATOM	6618	N	MET D 421	40.830	38.189	98.353	1.00	61.96	N
ATOM	6619	CA	MET D 421	40.233	36.958	97.909	1.00	61.23	C
ATOM	6620	C	MET D 421	39.229	36.266	98.798	1.00	60.15	C
ATOM	6621	O	MET D 421	38.393	35.534	98.295	1.00	60.63	O
ATOM	6622	CB	MET D 421	41.368	35.916	97.784	1.00	62.22	C
ATOM	6623	CG	MET D 421	41.916	35.960	96.369	1.00	63.61	C
ATOM	6624	SD	MET D 421	41.148	34.624	95.448	1.00	63.00	S
ATOM	6625	CE	MET D 421	42.379	33.382	95.900	1.00	65.22	C
ATOM	6626	N	VAL D 422	39.313	36.410	100.099	1.00	59.43	N
ATOM	6627	CA	VAL D 422	38.441	35.785	101.056	1.00	58.24	C
ATOM	6628	C	VAL D 422	36.983	36.109	100.795	1.00	57.82	C
ATOM	6629	O	VAL D 422	36.190	35.191	100.949	1.00	57.63	O
ATOM	6630	CB	VAL D 422	38.661	36.226	102.514	1.00	58.54	C
ATOM	6631	CG1	VAL D 422	38.766	35.009	103.410	1.00	59.06	C
ATOM	6632	CG2	VAL D 422	39.881	37.096	102.667	1.00	60.18	C
ATOM	6633	N	GLU D 423	36.646	37.343	100.455	1.00	58.12	N
ATOM	6634	CA	GLU D 423	35.263	37.713	100.211	1.00	58.27	C
ATOM	6635	C	GLU D 423	34.765	36.994	98.968	1.00	55.62	C
ATOM	6636	O	GLU D 423	33.628	36.547	98.970	1.00	56.46	O
ATOM	6637	CB	GLU D 423	35.048	39.198	99.981	1.00	63.42	C
ATOM	6638	CG	GLU D 423	35.607	40.072	101.091	1.00	69.69	C
ATOM	6639	CD	GLU D 423	37.063	40.422	100.811	1.00</		

ATOM	6641	OE2 GLU D 423	37.273	41.563	100.317	1.00	76.19	O
ATOM	6642	N ILE D 424	35.605	36.899	97.945	1.00	51.45	N
ATOM	6643	CA ILE D 424	35.187	36.170	96.744	1.00	47.81	C
ATOM	6644	C ILE D 424	35.039	34.724	97.165	1.00	47.54	C
ATOM	6645	O ILE D 424	33.999	34.133	96.882	1.00	49.69	O
ATOM	6646	CB ILE D 424	36.200	36.411	95.643	1.00	46.38	C
ATOM	6647	CG1 ILE D 424	36.114	37.903	95.294	1.00	45.36	C
ATOM	6648	CG2 ILE D 424	35.964	35.578	94.409	1.00	45.99	C
ATOM	6649	CD1 ILE D 424	37.263	38.335	94.436	1.00	44.90	C
ATOM	6650	N PHE D 425	35.937	34.114	97.908	1.00	46.05	N
ATOM	6651	CA PHE D 425	35.801	32.755	98.375	1.00	46.71	C
ATOM	6652	C PHE D 425	34.524	32.584	99.190	1.00	47.74	C
ATOM	6653	O PHE D 425	33.842	31.551	99.190	1.00	47.54	O
ATOM	6654	CB PHE D 425	37.016	32.405	99.248	1.00	47.30	C
ATOM	6655	CG PHE D 425	38.166	31.801	98.512	1.00	47.90	C
ATOM	6656	CD1 PHE D 425	38.451	32.223	97.212	1.00	48.30	C
ATOM	6657	CD2 PHE D 425	38.958	30.826	99.096	1.00	47.69	C
ATOM	6658	CE1 PHE D 425	39.503	31.687	96.492	1.00	47.94	C
ATOM	6659	CE2 PHE D 425	40.006	30.290	98.359	1.00	49.07	C
ATOM	6660	CZ PHE D 425	40.297	30.704	97.055	1.00	48.22	C
ATOM	6661	N ASP D 426	34.186	33.619	99.957	1.00	48.99	N
ATOM	6662	CA ASP D 426	32.995	33.592	100.806	1.00	49.66	C
ATOM	6663	C ASP D 426	31.745	33.515	99.960	1.00	48.65	C
ATOM	6664	O ASP D 426	30.937	32.600	100.126	1.00	49.33	O
ATOM	6665	CB ASP D 426	33.068	34.750	101.780	1.00	52.02	C
ATOM	6666	CG ASP D 426	33.849	34.319	103.014	1.00	54.93	C
ATOM	6667	OD1 ASP D 426	34.046	33.091	103.166	1.00	56.47	O
ATOM	6668	OD2 ASP D 426	34.255	35.179	103.836	1.00	56.41	O
ATOM	6669	N MET D 427	31.615	34.387	98.980	1.00	46.62	N
ATOM	6670	CA MET D 427	30.501	34.353	98.054	1.00	45.37	C
ATOM	6671	C MET D 427	30.453	33.005	97.344	1.00	44.51	C
ATOM	6672	O MET D 427	29.396	32.363	97.184	1.00	44.03	O
ATOM	6673	CB MET D 427	30.694	35.519	97.101	1.00	45.87	C
ATOM	6674	CG MET D 427	30.450	36.824	97.861	1.00	47.01	C
ATOM	6675	SD MET D 427	30.460	38.224	96.731	1.00	49.65	S
ATOM	6676	CE MET D 427	32.203	38.257	96.268	1.00	49.56	C
ATOM	6677	N LEU D 428	31.633	32.531	96.925	1.00	42.70	N
ATOM	6678	CA LEU D 428	31.688	31.231	96.268	1.00	41.62	C
ATOM	6679	C LEU D 428	31.151	30.140	97.192	1.00	41.91	C
ATOM	6680	O LEU D 428	30.313	29.314	96.779	1.00	42.48	O
ATOM	6681	CB LEU D 428	33.070	30.931	95.734	1.00	39.31	C
ATOM	6682	CG LEU D 428	33.510	31.798	94.557	1.00	38.32	C
ATOM	6683	CD1 LEU D 428	35.002	31.635	94.331	1.00	38.19	C
ATOM	6684	CD2 LEU D 428	32.761	31.369	93.301	1.00	39.42	C
ATOM	6685	N LEU D 429	31.572	30.144	98.456	1.00	41.27	N

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ATOM 6686 CA LEU D 429	31.106 29.081 99.350 1.00 40.57	C
ATOM 6687 C LEU D 429	29.624 29.149 99.574 1.00 40.99	C
ATOM 6688 O LEU D 429	28.927 28.132 99.528 1.00 42.18	O
ATOM 6689 CB LEU D 429	31.940 29.105 100.603 1.00 40.44	C
ATOM 6690 CG LEU D 429	33.393 28.673 100.380 1.00 39.94	C
ATOM 6691 CD1 LEU D 429	34.220 29.148 101.544 1.00 41.13	C
ATOM 6692 CD2 LEU D 429	33.455 27.174 100.190 1.00 39.25	C
ATOM 6693 N ALA D 430	29.084 30.334 99.778 1.00 40.85	N
ATOM 6694 CA ALA D 430	27.658 30.515 99.970 1.00 40.65	C
ATOM 6695 C ALA D 430	26.865 30.012 98.778 1.00 42.44	C
ATOM 6696 O ALA D 430	25.754 29.491 98.938 1.00 45.02	O
ATOM 6697 CB ALA D 430	27.394 32.002 100.090 1.00 40.90	C
ATOM 6698 N THR D 431	27.339 30.174 97.548 1.00 41.99	N
ATOM 6699 CA THR D 431	26.562 29.674 96.429 1.00 41.67	C
ATOM 6700 C THR D 431	26.632 28.170 96.457 1.00 42.17	C
ATOM 6701 O THR D 431	25.698 27.427 96.233 1.00 42.18	O
ATOM 6702 CB THR D 431	27.210 30.134 95.114 1.00 42.80	C
ATOM 6703 OG1 THR D 431	27.425 31.538 95.287 1.00 43.83	O
ATOM 6704 CG2 THR D 431	26.328 29.798 93.924 1.00 42.25	C
ATOM 6705 N SER D 432	27.845 27.694 96.722 1.00 43.94	N
ATOM 6706 CA SER D 432	28.113 26.258 96.733 1.00 45.18	C
ATOM 6707 C SER D 432	27.161 25.571 97.694 1.00 45.21	C
ATOM 6708 O SER D 432	26.566 24.533 97.490 1.00 44.06	O
ATOM 6709 CB SER D 432	29.597 26.004 97.039 1.00 44.71	C
ATOM 6710 OG SER D 432	29.733 24.588 96.992 1.00 46.22	O
ATOM 6711 N SER D 433	27.009 26.186 98.839 1.00 46.87	N
ATOM 6712 CA SER D 433	26.148 25.773 99.910 1.00 49.54	C
ATOM 6713 C SER D 433	24.695 25.808 99.488 1.00 50.44	C
ATOM 6714 O SER D 433	23.986 24.827 99.672 1.00 51.36	O
ATOM 6715 CB SER D 433	26.388 26.859 100.967 1.00 51.99	C
ATOM 6716 OG SER D 433	25.889 26.318 102.168 1.00 56.70	O
ATOM 6717 N ARG D 434	24.230 26.902 98.878 1.00 50.98	N
ATOM 6718 CA ARG D 434	22.866 26.983 98.398 1.00 51.45	C
ATOM 6719 C ARG D 434	22.667 25.859 97.401 1.00 51.71	C
ATOM 6720 O ARG D 434	21.629 25.218 97.447 1.00 51.99	O
ATOM 6721 CB ARG D 434	22.500 28.356 97.835 1.00 52.96	C
ATOM 6722 CG ARG D 434	21.112 28.377 97.229 1.00 55.73	C
ATOM 6723 CD ARG D 434	20.248 29.562 97.578 1.00 59.02	C
ATOM 6724 NE ARG D 434	18.818 29.386 97.162 1.00 61.34	N
ATOM 6725 CZ ARG D 434	18.049 28.559 97.888 1.00 62.31	C
ATOM 6726 NH1 ARG D 434	18.586 27.916 98.937 1.00 63.44	N
ATOM 6727 NH2 ARG D 434	16.779 28.329 97.626 1.00 62.37	N
ATOM 6728 N PHE D 435	23.601 25.561 96.505 1.00 53.07	N
ATOM 6729 CA PHE D 435	23.390 24.473 95.565 1.00 55.49	C
ATOM 6730 C PHE D 435	23.233 23.160 96.327 1.00 56.68	C

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ATOM	6731	O	PHE D 435	22.464	22.320	95.880	1.00	56.75	O
ATOM	6732	CB	PHE D 435	24.465	24.341	94.496	1.00	55.97	C
ATOM	6733	CG	PHE D 435	24.405	25.284	93.330	1.00	55.49	C
ATOM	6734	CD1	PHE D 435	23.305	26.079	93.092	1.00	54.48	C
ATOM	6735	CD2	PHE D 435	25.483	25.377	92.453	1.00	55.11	C
ATOM	6736	CE1	PHE D 435	23.279	26.933	92.021	1.00	54.48	C
ATOM	6737	CE2	PHE D 435	25.492	26.231	91.381	1.00	53.81	C
ATOM	6738	CZ	PHE D 435	24.371	27.007	91.182	1.00	54.80	C
ATOM	6739	N	ARG D 436	23.948	22.975	97.415	1.00	59.02	N
ATOM	6740	CA	ARG D 436	23.850	21.780	98.229	1.00	62.36	C
ATOM	6741	C	ARG D 436	22.438	21.680	98.802	1.00	63.86	C
ATOM	6742	O	ARG D 436	21.705	20.699	98.668	1.00	63.89	O
ATOM	6743	CB	ARG D 436	24.821	21.816	99.405	1.00	63.76	C
ATOM	6744	CG	ARG D 436	25.375	20.459	99.792	1.00	65.30	C
ATOM	6745	CD	ARG D 436	26.372	20.572	100.917	1.00	67.83	C
ATOM	6746	NE	ARG D 436	27.549	21.383	100.613	1.00	69.72	N
ATOM	6747	CZ	ARG D 436	27.843	22.514	101.258	1.00	71.40	C
ATOM	6748	NH1	ARG D 436	27.045	22.972	102.229	1.00	71.74	N
ATOM	6749	NH2	ARG D 436	28.936	23.197	100.915	1.00	72.03	N
ATOM	6750	N	MET D 437	22.010	22.747	99.450	1.00	65.91	N
ATOM	6751	CA	MET D 437	20.684	22.794	100.024	1.00	68.62	C
ATOM	6752	C	MET D 437	19.585	22.492	99.026	1.00	66.77	C
ATOM	6753	O	MET D 437	18.623	21.826	99.402	1.00	67.90	O
ATOM	6754	CB	MET D 437	20.403	24.194	100.553	1.00	74.44	C
ATOM	6755	CG	MET D 437	21.098	24.576	101.847	1.00	80.80	C
ATOM	6756	SD	MET D 437	20.089	25.899	102.610	1.00	88.26	S
ATOM	6757	CE	MET D 437	20.443	27.284	101.508	1.00	85.89	C
ATOM	6758	N	MET D 438	19.632	22.953	97.796	1.00	64.50	N
ATOM	6759	CA	MET D 438	18.587	22.713	96.823	1.00	62.84	C
ATOM	6760	C	MET D 438	18.746	21.388	96.107	1.00	61.42	C
ATOM	6761	O	MET D 438	17.960	21.047	95.251	1.00	59.51	O
ATOM	6762	CB	MET D 438	18.715	23.745	95.712	1.00	63.59	C
ATOM	6763	CG	MET D 438	18.648	25.161	96.229	1.00	63.86	C
ATOM	6764	SD	MET D 438	18.208	26.240	94.901	1.00	65.83	S
ATOM	6765	CE	MET D 438	17.124	25.322	93.843	1.00	65.16	C
ATOM	6766	N	ASN D 439	19.855	20.759	96.426	1.00	62.13	N
ATOM	6767	CA	ASN D 439	20.200	19.478	95.851	1.00	63.67	C
ATOM	6768	C	ASN D 439	20.096	19.540	94.338	1.00	61.62	C
ATOM	6769	O	ASN D 439	19.350	18.869	93.646	1.00	60.67	O
ATOM	6770	CB	ASN D 439	19.256	18.446	96.460	1.00	68.38	C
ATOM	6771	CG	ASN D 439	19.675	17.070	95.983	1.00	72.53	C
ATOM	6772	OD1	ASN D 439	18.818	16.196	95.891	1.00	75.86	O
ATOM	6773	ND2	ASN D 439	20.950	16.870	95.668	1.00	74.19	N
ATOM	6774	N	LEU D 440	20.927	20.428	93.817	1.00	60.06	N
ATOM	6775	CA	LEU D 440	20.991	20.713	92.398	1.00	58.92	C

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ATOM	6776	C	LEU D 440	21.482	19.488	91.649	1.00	59.80	C
ATOM	6777	O	LEU D 440	22.502	18.898	91.974	1.00	59.93	O
ATOM	6778	CB	LEU D 440	21.877	21.934	92.171	1.00	57.04	C
ATOM	6779	CG	LEU D 440	22.209	22.280	90.727	1.00	55.79	C
ATOM	6780	CD1	LEU D 440	20.992	22.898	90.077	1.00	55.60	C
ATOM	6781	CD2	LEU D 440	23.398	23.211	90.649	1.00	56.07	C
ATOM	6782	N	GLN D 441	20.729	19.111	90.627	1.00	60.60	N
ATOM	6783	CA	GLN D 441	21.067	17.981	89.792	1.00	61.02	C
ATOM	6784	C	GLN D 441	22.036	18.348	88.699	1.00	59.67	C
ATOM	6785	O	GLN D 441	22.047	19.490	88.298	1.00	60.79	O
ATOM	6786	CB	GLN D 441	19.784	17.547	89.071	1.00	63.67	C
ATOM	6787	CG	GLN D 441	18.746	16.948	89.995	1.00	67.17	C
ATOM	6788	CD	GLN D 441	19.375	16.015	91.025	1.00	69.21	C
ATOM	6789	OE1	GLN D 441	19.706	14.899	90.611	1.00	70.52	O
ATOM	6790	NE2	GLN D 441	19.536	16.461	92.274	1.00	69.73	N
ATOM	6791	N	GLY D 442	22.784	17.416	88.158	1.00	59.13	N
ATOM	6792	CA	GLY D 442	23.713	17.697	87.078	1.00	56.87	C
ATOM	6793	C	GLY D 442	22.979	18.101	85.824	1.00	56.45	C
ATOM	6794	O	GLY D 442	23.546	18.922	85.108	1.00	56.38	O
ATOM	6795	N	GLU D 443	21.780	17.593	85.534	1.00	56.59	N
ATOM	6796	CA	GLU D 443	21.083	18.001	84.315	1.00	57.10	C
ATOM	6797	C	GLU D 443	20.719	19.479	84.468	1.00	54.01	C
ATOM	6798	O	GLU D 443	20.759	20.200	83.499	1.00	53.31	O
ATOM	6799	CB	GLU D 443	19.818	17.241	83.962	1.00	61.47	C
ATOM	6800	CG	GLU D 443	19.787	15.730	83.877	1.00	64.56	C
ATOM	6801	CD	GLU D 443	20.350	15.084	85.131	1.00	66.39	C
ATOM	6802	OE1	GLU D 443	20.020	15.514	86.252	1.00	67.30	O
ATOM	6803	OE2	GLU D 443	21.152	14.148	84.960	1.00	67.90	O
ATOM	6804	N	GLU D 444	20.362	19.872	85.680	1.00	51.49	N
ATOM	6805	CA	GLU D 444	20.031	21.253	85.994	1.00	48.76	C
ATOM	6806	C	GLU D 444	21.278	22.093	85.805	1.00	47.38	C
ATOM	6807	O	GLU D 444	21.284	23.084	85.088	1.00	48.04	O
ATOM	6808	CB	GLU D 444	19.563	21.350	87.437	1.00	48.48	C
ATOM	6809	CG	GLU D 444	18.148	20.791	87.568	1.00	48.45	C
ATOM	6810	CD	GLU D 444	17.672	20.825	89.007	1.00	48.07	C
ATOM	6811	OE1	GLU D 444	18.484	20.503	89.894	1.00	46.60	O
ATOM	6812	OE2	GLU D 444	16.487	21.181	89.132	1.00	48.63	O
ATOM	6813	N	PHE D 445	22.367	21.654	86.413	1.00	45.51	N
ATOM	6814	CA	PHE D 445	23.650	22.321	86.311	1.00	44.62	C
ATOM	6815	C	PHE D 445	23.980	22.706	84.875	1.00	44.77	C
ATOM	6816	O	PHE D 445	24.234	23.841	84.512	1.00	45.62	O
ATOM	6817	CB	PHE D 445	24.794	21.461	86.864	1.00	43.02	C
ATOM	6818	CG	PHE D 445	26.158	21.994	86.559	1.00	41.95	C
ATOM	6819	CD1	PHE D 445	26.552	23.244	86.990	1.00	42.64	C
ATOM	6820	CD2	PHE D 445	27.057	21.271	85.831	1.00	41.88	C

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ATOM 6821	CE1 PHE D 445	27.795 23.757 86.729 1.00 42.63	C
ATOM 6822	CE2 PHE D 445	28.325 21.740 85.532 1.00 41.96	C
ATOM 6823	CZ PHE D 445	28.683 22.990 85.987 1.00 43.00	C
ATOM 6824	N VAL D 446	24.011 21.738 84.006 1.00 44.75	N
ATOM 6825	CA VAL D 446	24.323 21.845 82.595 1.00 44.55	C
ATOM 6826	C VAL D 446	23.423 22.850 81.915 1.00 45.82	C
ATOM 6827	O VAL D 446	23.856 23.614 81.021 1.00 46.31	O
ATOM 6828	CB VAL D 446	24.348 20.374 82.130 1.00 43.66	C
ATOM 6829	CG1 VAL D 446	23.502 20.001 80.941 1.00 43.51	C
ATOM 6830	CG2 VAL D 446	25.797 20.021 81.897 1.00 43.07	C
ATOM 6831	N CYS D 447	22.153 22.923 82.294 1.00 46.23	N
ATOM 6832	CA CYS D 447	21.235 23.886 81.701 1.00 47.72	C
ATOM 6833	C CYS D 447	21.530 25.334 82.093 1.00 47.52	C
ATOM 6834	O CYS D 447	21.531 26.206 81.246 1.00 46.80	O
ATOM 6835	CB CYS D 447	19.827 23.550 82.214 1.00 48.91	C
ATOM 6836	SG CYS D 447	18.991 22.336 81.203 1.00 50.22	S
ATOM 6837	N LEU D 448	21.738 25.570 83.391 1.00 46.99	N
ATOM 6838	CA LEU D 448	22.070 26.868 83.934 1.00 45.68	C
ATOM 6839	C LEU D 448	23.332 27.419 83.290 1.00 44.95	C
ATOM 6840	O LEU D 448	23.429 28.572 82.884 1.00 45.79	O
ATOM 6841	CB LEU D 448	22.314 26.760 85.434 1.00 45.92	C
ATOM 6842	CG LEU D 448	21.093 26.655 86.347 1.00 45.80	C
ATOM 6843	CD1 LEU D 448	21.617 26.450 87.757 1.00 46.68	C
ATOM 6844	CD2 LEU D 448	20.193 27.878 86.304 1.00 44.62	C
ATOM 6845	N LYS D 449	24.331 26.561 83.154 1.00 44.17	N
ATOM 6846	CA LYS D 449	25.599 26.948 82.536 1.00 43.37	C
ATOM 6847	C LYS D 449	25.338 27.458 81.139 1.00 42.62	C
ATOM 6848	O LYS D 449	25.877 28.518 80.806 1.00 43.03	O
ATOM 6849	CB LYS D 449	26.554 25.791 82.659 1.00 43.95	C
ATOM 6850	CG LYS D 449	28.009 26.153 82.807 1.00 44.50	C
ATOM 6851	CD LYS D 449	28.769 25.193 81.908 1.00 45.79	C
ATOM 6852	CE LYS D 449	29.224 23.981 82.706 1.00 46.49	C
ATOM 6853	NZ LYS D 449	30.163 23.282 81.735 1.00 49.77	N
ATOM 6854	N SER D 450	24.512 26.815 80.322 1.00 42.15	N
ATOM 6855	CA SER D 450	24.238 27.374 78.992 1.00 41.89	C
ATOM 6856	C SER D 450	23.410 28.642 79.057 1.00 40.65	C
ATOM 6857	O SER D 450	23.605 29.481 78.202 1.00 41.51	O
ATOM 6858	CB SER D 450	23.432 26.431 78.101 1.00 42.84	C
ATOM 6859	OG SER D 450	24.173 25.209 78.223 1.00 46.38	O
ATOM 6860	N ILE D 451	22.513 28.790 80.017 1.00 39.36	N
ATOM 6861	CA ILE D 451	21.698 29.976 80.148 1.00 37.93	C
ATOM 6862	C ILE D 451	22.686 31.110 80.369 1.00 37.94	C
ATOM 6863	O ILE D 451	22.518 32.116 79.704 1.00 37.47	O
ATOM 6864	CB ILE D 451	20.725 29.872 81.329 1.00 38.37	C
ATOM 6865	CG1 ILE D 451	19.741 28.776 80.952 1.00 38.67	C

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ATOM	6866	CG2 ILE D 451	20.093	31.213	81.662	1.00	37.38	C
ATOM	6867	CD1 ILE D 451	18.514	28.737	81.822	1.00	41.51	C
ATOM	6868	N ILE D 452	23.676	30.877	81.240	1.00	37.60	N
ATOM	6869	CA ILE D 452	24.691	31.886	81.525	1.00	36.56	C
ATOM	6870	C ILE D 452	25.436	32.257	80.256	1.00	36.13	C
ATOM	6871	O ILE D 452	25.610	33.434	80.030	1.00	36.37	O
ATOM	6872	CB ILE D 452	25.730	31.436	82.579	1.00	35.77	C
ATOM	6873	CG1 ILE D 452	25.014	31.155	83.900	1.00	34.24	C
ATOM	6874	CG2 ILE D 452	26.844	32.461	82.723	1.00	34.78	C
ATOM	6875	CD1 ILE D 452	25.892	30.989	85.099	1.00	33.24	C
ATOM	6876	N LEU D 453	25.838	31.286	79.452	1.00	36.42	N
ATOM	6877	CA LEU D 453	26.549	31.553	78.228	1.00	36.94	C
ATOM	6878	C LEU D 453	25.696	32.400	77.310	1.00	38.42	C
ATOM	6879	O LEU D 453	26.173	33.323	76.682	1.00	39.35	O
ATOM	6880	CB LEU D 453	26.968	30.277	77.478	1.00	35.54	C
ATOM	6881	CG LEU D 453	27.531	30.530	76.067	1.00	35.05	C
ATOM	6882	CD1 LEU D 453	28.844	31.294	76.058	1.00	33.75	C
ATOM	6883	CD2 LEU D 453	27.718	29.250	75.299	1.00	34.02	C
ATOM	6884	N LEU D 454	24.431	32.083	77.160	1.00	41.14	N
ATOM	6885	CA LEU D 454	23.570	32.821	76.262	1.00	43.55	C
ATOM	6886	C LEU D 454	22.976	34.121	76.765	1.00	44.50	C
ATOM	6887	O LEU D 454	22.805	35.002	75.913	1.00	46.40	O
ATOM	6888	CB LEU D 454	22.380	31.917	75.839	1.00	43.39	C
ATOM	6889	CG LEU D 454	22.823	30.835	74.849	1.00	43.72	C
ATOM	6890	CD1 LEU D 454	21.789	29.750	74.787	1.00	44.06	C
ATOM	6891	CD2 LEU D 454	23.000	31.428	73.468	1.00	44.69	C
ATOM	6892	N ASN D 455	22.633	34.271	78.022	1.00	44.28	N
ATOM	6893	CA ASN D 455	21.990	35.492	78.456	1.00	45.22	C
ATOM	6894	C ASN D 455	22.911	36.573	78.923	1.00	48.85	C
ATOM	6895	O ASN D 455	22.447	37.720	78.958	1.00	51.01	O
ATOM	6896	CB ASN D 455	21.026	35.166	79.579	1.00	44.21	C
ATOM	6897	CG ASN D 455	20.481	36.271	80.419	1.00	43.95	C
ATOM	6898	OD1 ASN D 455	20.909	36.409	81.568	1.00	44.44	O
ATOM	6899	ND2 ASN D 455	19.557	37.057	79.888	1.00	43.94	N
ATOM	6900	N SER D 456	24.141	36.290	79.297	1.00	52.15	N
ATOM	6901	CA SER D 456	24.949	37.375	79.841	1.00	55.13	C
ATOM	6902	C SER D 456	25.284	38.474	78.866	1.00	57.33	C
ATOM	6903	O SER D 456	25.192	39.676	79.158	1.00	58.90	O
ATOM	6904	CB SER D 456	26.177	36.767	80.523	1.00	55.03	C
ATOM	6905	OG SER D 456	25.851	36.397	81.835	1.00	53.67	O
ATOM	6906	N GLY D 457	25.695	38.152	77.664	1.00	59.87	N
ATOM	6907	CA GLY D 457	26.071	39.211	76.728	1.00	63.73	C
ATOM	6908	C GLY D 457	24.984	39.616	75.764	1.00	65.27	C
ATOM	6909	O GLY D 457	25.290	40.349	74.835	1.00	64.43	O
ATOM	6910	N VAL D 458	23.767	39.137	75.986	1.00	68.09	N

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ATOM 6911 CA VAL D 458	22.681 39.469 75.080 1.00 71.03	C
ATOM 6912 C VAL D 458	22.321 40.933 74.994 1.00 74.49	C
ATOM 6913 O VAL D 458	22.036 41.364 73.869 1.00 75.49	O
ATOM 6914 CB VAL D 458	21.475 38.547 75.320 1.00 69.39	C
ATOM 6915 CG1 VAL D 458	20.688 38.875 76.549 1.00 68.27	C
ATOM 6916 CG2 VAL D 458	20.585 38.594 74.081 1.00 69.67	C
ATOM 6917 N TYR D 459	22.356 41.782 75.995 1.00 78.79	N
ATOM 6918 CA TYR D 459	22.008 43.181 75.933 1.00 83.41	C
ATOM 6919 C TYR D 459	23.164 44.036 75.477 1.00 85.77	C
ATOM 6920 O TYR D 459	23.175 45.241 75.717 1.00 87.22	O
ATOM 6921 CB TYR D 459	21.561 43.737 77.319 1.00 85.69	C
ATOM 6922 CG TYR D 459	20.493 42.800 77.854 1.00 87.98	C
ATOM 6923 CD1 TYR D 459	20.862 41.683 78.595 1.00 88.70	C
ATOM 6924 CD2 TYR D 459	19.147 43.003 77.594 1.00 88.99	C
ATOM 6925 CE1 TYR D 459	19.896 40.820 79.060 1.00 90.23	C
ATOM 6926 CE2 TYR D 459	18.177 42.130 78.049 1.00 90.00	C
ATOM 6927 CZ TYR D 459	18.552 41.030 78.792 1.00 90.79	C
ATOM 6928 OH TYR D 459	17.609 40.133 79.271 1.00 91.09	O
ATOM 6929 N THR D 460	24.163 43.468 74.843 1.00 88.54	N
ATOM 6930 CA THR D 460	25.327 44.222 74.394 1.00 90.99	C
ATOM 6931 C THR D 460	25.819 43.676 73.061 1.00 92.45	C
ATOM 6932 O THR D 460	27.027 43.515 72.869 1.00 93.66	O
ATOM 6933 CB THR D 460	26.450 44.148 75.445 1.00 91.16	C
ATOM 6934 OG1 THR D 460	26.154 43.307 76.561 1.00 91.27	O
ATOM 6935 CG2 THR D 460	26.656 45.535 76.037 1.00 92.12	C
ATOM 6936 N PHE D 461	24.892 43.387 72.153 1.00 93.56	N
ATOM 6937 CA PHE D 461	25.314 42.844 70.878 1.00 94.98	C
ATOM 6938 C PHE D 461	26.108 43.738 69.942 1.00 96.35	C
ATOM 6939 O PHE D 461	27.113 43.214 69.399 1.00 97.69	O
ATOM 6940 CB PHE D 461	24.119 42.166 70.170 1.00 94.65	C
ATOM 6941 CG PHE D 461	24.263 40.679 70.430 1.00 93.76	C
ATOM 6942 CD1 PHE D 461	25.524 40.137 70.616 1.00 93.43	C
ATOM 6943 CD2 PHE D 461	23.176 39.849 70.503 1.00 93.49	C
ATOM 6944 CE1 PHE D 461	25.726 38.809 70.870 1.00 93.10	C
ATOM 6945 CE2 PHE D 461	23.368 38.511 70.750 1.00 93.62	C
ATOM 6946 CZ PHE D 461	24.631 37.983 70.932 1.00 93.40	C
ATOM 6947 N THR D 465	22.624 45.967 63.550 1.00127.65	N
ATOM 6948 CA THR D 465	21.376 46.227 64.267 1.00127.69	C
ATOM 6949 C THR D 465	20.289 45.238 63.883 1.00126.64	C
ATOM 6950 O THR D 465	19.950 44.353 64.675 1.00127.34	O
ATOM 6951 CB THR D 465	20.851 47.661 64.084 1.00128.43	C
ATOM 6952 OG1 THR D 465	19.424 47.705 64.272 1.00128.82	O
ATOM 6953 CG2 THR D 465	21.170 48.197 62.693 1.00128.79	C
ATOM 6954 N LEU D 466	19.741 45.302 62.672 1.00124.51	N
ATOM 6955 CA LEU D 466	18.705 44.356 62.251 1.00122.04	C

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ATOM	6956	C	LEU D 466	19.174	42.908	62.392	1.00119.80	C
ATOM	6957	O	LEU D 466	18.380	42.001	62.689	1.00119.83	O
ATOM	6958	CB	LEU D 466	18.239	44.686	60.837	1.00122.41	C
ATOM	6962	N	LYS D 467	20.472	42.656	62.200	1.00116.36	N
ATOM	6963	CA	LYS D 467	21.041	41.328	62.370	1.00112.85	C
ATOM	6964	C	LYS D 467	21.062	41.103	63.887	1.00108.83	C
ATOM	6965	O	LYS D 467	20.845	39.985	64.333	1.00108.82	O
ATOM	6966	CB	LYS D 467	22.439	41.155	61.790	1.00114.37	C
ATOM	6967	CG	LYS D 467	22.851	39.725	61.452	1.00115.62	C
ATOM	6968	CD	LYS D 467	24.347	39.658	61.199	1.00117.19	C
ATOM	6969	CE	LYS D 467	24.756	39.606	59.729	1.00117.88	C
ATOM	6970	NZ	LYS D 467	26.238	39.769	59.560	1.00117.63	N
ATOM	6971	N	SER D 468	21.292	42.150	64.670	1.00103.70	N
ATOM	6972	CA	SER D 468	21.303	42.054	66.114	1.00 99.58	C
ATOM	6973	C	SER D 468	19.922	41.722	66.669	1.00 96.01	C
ATOM	6974	O	SER D 468	19.782	40.953	67.608	1.00 95.40	O
ATOM	6975	CB	SER D 468	21.709	43.362	66.797	1.00100.34	C
ATOM	6976	OG	SER D 468	23.064	43.653	66.528	1.00101.77	O
ATOM	6977	N	LEU D 469	18.903	42.320	66.067	1.00 92.13	N
ATOM	6978	CA	LEU D 469	17.527	42.083	66.486	1.00 88.58	C
ATOM	6979	C	LEU D 469	17.207	40.624	66.216	1.00 86.29	C
ATOM	6980	O	LEU D 469	16.507	39.969	66.976	1.00 85.00	O
ATOM	6981	CB	LEU D 469	16.606	43.082	65.801	1.00 89.09	C
ATOM	6985	N	GLU D 470	17.735	40.088	65.119	1.00 84.72	N
ATOM	6986	CA	GLU D 470	17.526	38.684	64.759	1.00 83.02	C
ATOM	6987	C	GLU D 470	18.373	37.818	65.673	1.00 78.98	C
ATOM	6988	O	GLU D 470	17.939	36.776	66.149	1.00 77.81	O
ATOM	6989	CB	GLU D 470	17.772	38.529	63.280	1.00 87.02	C
ATOM	6990	CG	GLU D 470	18.612	37.362	62.816	1.00 92.72	C
ATOM	6991	CD	GLU D 470	19.073	37.527	61.375	1.00 96.70	C
ATOM	6992	OE1	GLU D 470	18.960	38.661	60.822	1.00 98.66	O
ATOM	6993	OE2	GLU D 470	19.551	36.519	60.786	1.00 98.72	O
ATOM	6994	N	GLU D 471	19.596	38.228	65.989	1.00 75.15	N
ATOM	6995	CA	GLU D 471	20.506	37.543	66.889	1.00 70.77	C
ATOM	6996	C	GLU D 471	19.871	37.513	68.283	1.00 69.37	C
ATOM	6997	O	GLU D 471	19.873	36.498	68.972	1.00 68.92	O
ATOM	6998	CB	GLU D 471	21.863	38.216	66.977	1.00 69.02	C
ATOM	6999	CG	GLU D 471	22.727	38.202	65.767	1.00 67.63	C
ATOM	7000	CD	GLU D 471	23.780	37.140	65.725	1.00 68.27	C
ATOM	7001	OE1	GLU D 471	24.767	37.192	66.463	1.00 67.40	O
ATOM	7002	OE2	GLU D 471	23.681	36.173	64.932	1.00 69.91	O
ATOM	7003	N	LYS D 472	19.311	38.636	68.724	1.00 68.00	N
ATOM	7004	CA	LYS D 472	18.643	38.704	70.011	1.00 66.62	C
ATOM	7005	C	LYS D 472	17.455	37.755	70.031	1.00 64.90	C
ATOM	7006	O	LYS D 472	17.316	37.050	71.014	1.00 65.02	O

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ATOM 7007 CB LYS D 472	18.168 40.104 70.395 1.00 67.81	C
ATOM 7008 CG LYS D 472	19.292 41.038 70.752 1.00 70.56	C
ATOM 7009 CD LYS D 472	18.827 42.323 71.380 1.00 73.00	C
ATOM 7010 CE LYS D 472	19.691 43.522 71.019 1.00 75.44	C
ATOM 7011 NZ LYS D 472	20.894 43.754 71.896 1.00 77.11	N
ATOM 7012 N ASP D 473	16.602 37.676 69.030 1.00 64.19	N
ATOM 7013 CA ASP D 473	15.466 36.783 69.058 1.00 64.15	C
ATOM 7014 C ASP D 473	15.899 35.335 69.128 1.00 61.42	C
ATOM 7015 O ASP D 473	15.385 34.559 69.902 1.00 62.62	O
ATOM 7016 CB ASP D 473	14.611 36.829 67.796 1.00 68.83	C
ATOM 7017 CG ASP D 473	13.999 38.198 67.618 1.00 73.25	C
ATOM 7018 OD1 ASP D 473	14.079 39.069 68.518 1.00 75.35	O
ATOM 7019 OD2 ASP D 473	13.409 38.384 66.527 1.00 76.20	O
ATOM 7020 N HIS D 474	16.838 34.967 68.286 1.00 57.77	N
ATOM 7021 CA HIS D 474	17.345 33.610 68.285 1.00 54.52	C
ATOM 7022 C HIS D 474	17.726 33.238 69.714 1.00 53.80	C
ATOM 7023 O HIS D 474	17.292 32.240 70.293 1.00 52.80	O
ATOM 7024 CB HIS D 474	18.570 33.612 67.358 1.00 53.69	C
ATOM 7025 CG HIS D 474	19.062 32.195 67.328 1.00 53.28	C
ATOM 7026 ND1 HIS D 474	18.207 31.170 66.988 1.00 52.17	N
ATOM 7027 CD2 HIS D 474	20.267 31.676 67.651 1.00 53.88	C
ATOM 7028 CE1 HIS D 474	18.892 30.051 67.065 1.00 53.66	C
ATOM 7029 NE2 HIS D 474	20.131 30.321 67.468 1.00 54.49	N
ATOM 7030 N ILE D 475	18.586 34.047 70.342 1.00 53.00	N
ATOM 7031 CA ILE D 475	19.002 33.822 71.705 1.00 52.51	C
ATOM 7032 C ILE D 475	17.794 33.715 72.609 1.00 52.34	C
ATOM 7033 O ILE D 475	17.680 32.717 73.325 1.00 51.65	O
ATOM 7034 CB ILE D 475	19.957 34.910 72.201 1.00 53.42	C
ATOM 7035 CG1 ILE D 475	21.273 34.733 71.434 1.00 53.48	C
ATOM 7036 CG2 ILE D 475	20.174 34.816 73.709 1.00 53.71	C
ATOM 7037 CD1 ILE D 475	22.329 35.716 71.891 1.00 53.61	C
ATOM 7038 N HIS D 476	16.885 34.674 72.601 1.00 53.82	N
ATOM 7039 CA HIS D 476	15.700 34.570 73.454 1.00 56.40	C
ATOM 7040 C HIS D 476	14.964 33.260 73.213 1.00 57.06	C
ATOM 7041 O HIS D 476	14.536 32.605 74.163 1.00 57.87	O
ATOM 7042 CB HIS D 476	14.776 35.765 73.299 1.00 58.36	C
ATOM 7043 CG HIS D 476	15.381 36.987 73.932 1.00 59.96	C
ATOM 7044 ND1 HIS D 476	15.964 36.937 75.168 1.00 60.20	N
ATOM 7045 CD2 HIS D 476	15.490 38.263 73.490 1.00 60.94	C
ATOM 7046 CE1 HIS D 476	16.414 38.150 75.448 1.00 61.50	C
ATOM 7047 NE2 HIS D 476	16.146 38.983 74.461 1.00 60.99	N
ATOM 7048 N ARG D 477	14.814 32.815 71.987 1.00 57.42	N
ATOM 7049 CA ARG D 477	14.197 31.586 71.587 1.00 57.91	C
ATOM 7050 C ARG D 477	14.841 30.342 72.177 1.00 56.02	C
ATOM 7051 O ARG D 477	14.134 29.464 72.665 1.00 56.11	O

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ATOM	7052	CB	ARG D 477	14.316	31.406	70.069	1.00	62.44	C
ATOM	7053	CG	ARG D 477	13.037	30.852	69.468	1.00	67.89	C
ATOM	7054	CD	ARG D 477	12.106	32.067	69.294	1.00	73.64	C
ATOM	7055	NE	ARG D 477	12.755	32.943	68.307	1.00	79.62	N
ATOM	7056	CZ	ARG D 477	12.723	32.654	66.993	1.00	82.77	C
ATOM	7057	NH1	ARG D 477	12.074	31.552	66.581	1.00	84.58	N
ATOM	7058	NH2	ARG D 477	13.327	33.463	66.125	1.00	83.31	N
ATOM	7059	N	VAL D 478	16.164	30.245	72.108	1.00	53.51	N
ATOM	7060	CA	VAL D 478	16.899	29.103	72.662	1.00	50.86	C
ATOM	7061	C	VAL D 478	16.752	29.150	74.171	1.00	49.96	C
ATOM	7062	O	VAL D 478	16.558	28.175	74.891	1.00	50.09	O
ATOM	7063	CB	VAL D 478	18.382	29.178	72.250	1.00	50.20	C
ATOM	7064	CG1	VAL D 478	19.216	28.029	72.758	1.00	48.27	C
ATOM	7065	CG2	VAL D 478	18.446	29.262	70.725	1.00	50.29	C
ATOM	7066	N	LEU D 479	16.795	30.363	74.733	1.00	48.62	N
ATOM	7067	CA	LEU D 479	16.616	30.525	76.169	1.00	47.30	C
ATOM	7068	C	LEU D 479	15.276	29.961	76.605	1.00	48.58	C
ATOM	7069	O	LEU D 479	15.220	29.398	77.701	1.00	49.89	O
ATOM	7070	CB	LEU D 479	16.775	31.980	76.570	1.00	44.30	C
ATOM	7071	CG	LEU D 479	18.221	32.407	76.806	1.00	41.99	C
ATOM	7072	CD1	LEU D 479	18.316	33.919	76.921	1.00	41.99	C
ATOM	7073	CD2	LEU D 479	18.795	31.728	78.021	1.00	40.35	C
ATOM	7074	N	ASP D 480	14.210	30.084	75.818	1.00	49.32	N
ATOM	7075	CA	ASP D 480	12.914	29.543	76.184	1.00	48.95	C
ATOM	7076	C	ASP D 480	12.997	28.035	76.109	1.00	49.02	C
ATOM	7077	O	ASP D 480	12.503	27.345	76.972	1.00	48.57	O
ATOM	7078	CB	ASP D 480	11.818	30.030	75.284	1.00	50.60	C
ATOM	7079	CG	ASP D 480	11.434	31.479	75.430	1.00	52.07	C
ATOM	7080	OD1	ASP D 480	11.626	32.083	76.497	1.00	52.84	O
ATOM	7081	OD2	ASP D 480	10.914	32.052	74.437	1.00	53.13	O
ATOM	7082	N	LYS D 481	13.653	27.514	75.096	1.00	51.64	N
ATOM	7083	CA	LYS D 481	13.813	26.069	74.922	1.00	53.47	C
ATOM	7084	C	LYS D 481	14.538	25.531	76.137	1.00	52.34	C
ATOM	7085	O	LYS D 481	14.057	24.571	76.712	1.00	53.37	O
ATOM	7086	CB	LYS D 481	14.582	25.684	73.664	1.00	56.66	C
ATOM	7087	CG	LYS D 481	14.441	24.208	73.351	1.00	61.56	C
ATOM	7088	CD	LYS D 481	13.285	23.957	72.380	1.00	65.28	C
ATOM	7089	CE	LYS D 481	12.750	22.535	72.454	1.00	67.98	C
ATOM	7090	NZ	LYS D 481	12.998	21.867	73.776	1.00	70.18	N
ATOM	7091	N	ILE D 482	15.627	26.170	76.564	1.00	50.96	N
ATOM	7092	CA	ILE D 482	16.337	25.699	77.749	1.00	49.43	C
ATOM	7093	C	ILE D 482	15.423	25.802	78.951	1.00	48.89	C
ATOM	7094	O	ILE D 482	15.434	24.924	79.824	1.00	49.34	O
ATOM	7095	CB	ILE D 482	17.681	26.367	77.979	1.00	49.26	C
ATOM	7096	CG1	ILE D 482	18.611	26.001	76.815	1.00	49.57	C

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ATOM 7097	CG2 ILE D 482	18.331 25.915 79.270 1.00 48.99	C
ATOM 7098	CD1 ILE D 482	19.441 27.195 76.405 1.00 49.58	C
ATOM 7099	N THR D 483	14.572 26.816 79.034 1.00 48.55	N
ATOM 7100	CA THR D 483	13.648 26.883 80.168 1.00 48.75	C
ATOM 7101	C THR D 483	12.727 25.666 80.165 1.00 49.97	C
ATOM 7102	O THR D 483	12.480 25.027 81.188 1.00 50.53	O
ATOM 7103	CB THR D 483	12.796 28.149 80.107 1.00 47.82	C
ATOM 7104	OG1 THR D 483	13.740 29.204 80.281 1.00 48.13	O
ATOM 7105	CG2 THR D 483	11.734 28.119 81.182 1.00 47.64	C
ATOM 7106	N ASP D 484	12.221 25.336 78.964 1.00 49.96	N
ATOM 7107	CA ASP D 484	11.329 24.201 78.824 1.00 48.69	C
ATOM 7108	C ASP D 484	12.055 22.962 79.277 1.00 48.48	C
ATOM 7109	O ASP D 484	11.484 22.156 80.010 1.00 50.20	O
ATOM 7110	CB ASP D 484	10.818 24.054 77.419 1.00 49.22	C
ATOM 7111	CG ASP D 484	9.855 25.145 77.025 1.00 50.77	C
ATOM 7112	OD1 ASP D 484	9.301 25.870 77.886 1.00 50.61	O
ATOM 7113	OD2 ASP D 484	9.653 25.271 75.789 1.00 52.45	O
ATOM 7114	N THR D 485	13.310 22.799 78.886 1.00 47.73	N
ATOM 7115	CA THR D 485	14.055 21.610 79.302 1.00 47.22	C
ATOM 7116	C THR D 485	14.152 21.504 80.810 1.00 48.41	C
ATOM 7117	O THR D 485	14.057 20.420 81.374 1.00 48.46	O
ATOM 7118	CB THR D 485	15.460 21.727 78.713 1.00 45.73	C
ATOM 7119	OG1 THR D 485	15.224 21.938 77.324 1.00 45.98	O
ATOM 7120	CG2 THR D 485	16.242 20.496 79.033 1.00 45.10	C
ATOM 7121	N LEU D 486	14.336 22.652 81.464 1.00 48.84	N
ATOM 7122	CA LEU D 486	14.445 22.680 82.908 1.00 49.26	C
ATOM 7123	C LEU D 486	13.173 22.222 83.594 1.00 50.81	C
ATOM 7124	O LEU D 486	13.225 21.422 84.521 1.00 50.74	O
ATOM 7125	CB LEU D 486	14.766 24.095 83.387 1.00 47.63	C
ATOM 7126	CG LEU D 486	16.242 24.335 83.695 1.00 46.21	C
ATOM 7127	CD1 LEU D 486	16.377 25.792 84.101 1.00 46.08	C
ATOM 7128	CD2 LEU D 486	16.818 23.376 84.714 1.00 43.41	C
ATOM 7129	N ILE D 487	12.031 22.742 83.137 1.00 52.73	N
ATOM 7130	CA ILE D 487	10.736 22.360 83.707 1.00 53.30	C
ATOM 7131	C ILE D 487	10.511 20.882 83.456 1.00 54.63	C
ATOM 7132	O ILE D 487	10.065 20.157 84.323 1.00 54.41	O
ATOM 7133	CB ILE D 487	9.598 23.141 83.053 1.00 52.55	C
ATOM 7134	CG1 ILE D 487	9.676 24.593 83.491 1.00 53.86	C
ATOM 7135	CG2 ILE D 487	8.283 22.509 83.415 1.00 53.12	C
ATOM 7136	CD1 ILE D 487	9.134 24.958 84.855 1.00 52.98	C
ATOM 7137	N HIS D 488	10.857 20.468 82.238 1.00 57.04	N
ATOM 7138	CA HIS D 488	10.720 19.085 81.829 1.00 59.25	C
ATOM 7139	C HIS D 488	11.406 18.179 82.838 1.00 58.05	C
ATOM 7140	O HIS D 488	10.892 17.222 83.368 1.00 57.71	O
ATOM 7141	CB HIS D 488	11.346 18.872 80.448 1.00 62.29	C

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ATOM	7142	CG	HIS D 488	11.405	17.399	80.140	1.00	65.17	C
ATOM	7143	ND1	HIS D 488	10.283	16.647	79.880	1.00	66.20	N
ATOM	7144	CD2	HIS D 488	12.478	16.572	80.079	1.00	66.45	C
ATOM	7145	CE1	HIS D 488	10.692	15.405	79.660	1.00	67.99	C
ATOM	7146	NE2	HIS D 488	12.020	15.318	79.775	1.00	67.51	N
ATOM	7147	N	LEU D 489	12.657	18.487	83.108	1.00	57.87	N
ATOM	7148	CA	LEU D 489	13.449	17.742	84.055	1.00	57.53	C
ATOM	7149	C	LEU D 489	12.778	17.642	85.404	1.00	58.23	C
ATOM	7150	O	LEU D 489	12.730	16.581	85.998	1.00	59.34	O
ATOM	7151	CB	LEU D 489	14.777	18.483	84.230	1.00	57.04	C
ATOM	7152	CG	LEU D 489	15.786	18.189	83.137	1.00	57.56	C
ATOM	7153	CD1	LEU D 489	16.973	19.125	83.290	1.00	58.88	C
ATOM	7154	CD2	LEU D 489	16.267	16.752	83.176	1.00	57.38	C
ATOM	7155	N	MET D 490	12.284	18.722	85.953	1.00	59.22	N
ATOM	7156	CA	MET D 490	11.641	18.827	87.233	1.00	59.67	C
ATOM	7157	C	MET D 490	10.329	18.068	87.318	1.00	60.84	C
ATOM	7158	O	MET D 490	10.051	17.498	88.371	1.00	61.71	O
ATOM	7159	CB	MET D 490	11.319	20.304	87.492	1.00	59.79	C
ATOM	7160	CG	MET D 490	12.404	21.038	88.234	1.00	59.24	C
ATOM	7161	SD	MET D 490	12.190	22.803	88.134	1.00	57.81	S
ATOM	7162	CE	MET D 490	13.863	23.335	87.948	1.00	59.41	C
ATOM	7163	N	ALA D 491	9.549	18.101	86.237	1.00	61.24	N
ATOM	7164	CA	ALA D 491	8.278	17.372	86.247	1.00	61.75	C
ATOM	7165	C	ALA D 491	8.674	15.904	86.334	1.00	61.95	C
ATOM	7166	O	ALA D 491	8.204	15.123	87.136	1.00	61.50	O
ATOM	7167	CB	ALA D 491	7.429	17.679	85.044	1.00	61.70	C
ATOM	7168	N	LYS D 492	9.646	15.491	85.537	1.00	63.32	N
ATOM	7169	CA	LYS D 492	10.146	14.128	85.511	1.00	64.48	C
ATOM	7170	C	LYS D 492	10.578	13.747	86.903	1.00	65.18	C
ATOM	7171	O	LYS D 492	10.428	12.584	87.273	1.00	67.28	O
ATOM	7172	CB	LYS D 492	11.221	13.848	84.463	1.00	63.79	C
ATOM	7177	N	ALA D 493	11.041	14.629	87.765	1.00	66.09	N
ATOM	7178	CA	ALA D 493	11.389	14.273	89.140	1.00	66.81	C
ATOM	7179	C	ALA D 493	10.128	14.356	90.001	1.00	67.36	C
ATOM	7180	O	ALA D 493	10.063	14.195	91.207	1.00	67.78	O
ATOM	7181	CB	ALA D 493	12.473	15.145	89.721	1.00	65.96	C
ATOM	7182	N	GLY D 494	9.005	14.625	89.380	1.00	68.06	N
ATOM	7183	CA	GLY D 494	7.740	14.708	90.043	1.00	69.81	C
ATOM	7184	C	GLY D 494	7.663	15.827	91.061	1.00	69.63	C
ATOM	7185	O	GLY D 494	7.480	15.557	92.250	1.00	71.09	O
ATOM	7186	N	LEU D 495	7.765	17.081	90.656	1.00	68.58	N
ATOM	7187	CA	LEU D 495	7.591	18.133	91.647	1.00	67.21	C
ATOM	7188	C	LEU D 495	6.226	18.693	91.258	1.00	67.00	C
ATOM	7189	O	LEU D 495	5.965	18.674	90.055	1.00	67.42	O
ATOM	7190	CB	LEU D 495	8.577	19.265	91.570	1.00	67.41	C

ATOM	7191	CG LEU D 495	10.064	19.001	91.516	1.00	67.23	C
ATOM	7192	CD1 LEU D 495	10.835	20.279	91.744	1.00	66.57	C
ATOM	7193	CD2 LEU D 495	10.474	17.996	92.580	1.00	68.59	C
ATOM	7194	N THR D 496	5.459	19.174	92.194	1.00	67.01	N
ATOM	7195	CA THR D 496	4.175	19.743	91.803	1.00	68.57	C
ATOM	7196	C THR D 496	4.381	20.804	90.758	1.00	68.94	C
ATOM	7197	O THR D 496	5.466	21.344	90.612	1.00	70.43	O
ATOM	7198	CB THR D 496	3.642	20.474	93.043	1.00	69.67	C
ATOM	7199	OG1 THR D 496	3.559	19.460	94.038	1.00	70.00	O
ATOM	7200	CG2 THR D 496	2.303	21.162	92.843	1.00	72.03	C
ATOM	7201	N LEU D 497	3.354	21.242	90.073	1.00	69.68	N
ATOM	7202	CA LEU D 497	3.459	22.327	89.113	1.00	70.36	C
ATOM	7203	C LEU D 497	3.924	23.570	89.853	1.00	70.71	C
ATOM	7204	O LEU D 497	4.636	24.418	89.326	1.00	71.29	O
ATOM	7205	CB LEU D 497	2.089	22.554	88.518	1.00	71.76	C
ATOM	7206	CG LEU D 497	1.898	22.725	87.025	1.00	72.92	C
ATOM	7207	CD1 LEU D 497	1.027	23.981	86.893	1.00	74.10	C
ATOM	7208	CD2 LEU D 497	3.226	22.851	86.288	1.00	73.59	C
ATOM	7209	N GLN D 498	3.526	23.722	91.110	1.00	71.33	N
ATOM	7210	CA GLN D 498	3.909	24.874	91.906	1.00	71.87	C
ATOM	7211	C GLN D 498	5.343	24.739	92.364	1.00	70.16	C
ATOM	7212	O GLN D 498	6.065	25.726	92.369	1.00	70.91	O
ATOM	7213	CB GLN D 498	3.011	25.127	93.108	1.00	74.58	C
ATOM	7214	CG GLN D 498	3.668	25.956	94.183	1.00	77.41	C
ATOM	7215	CD GLN D 498	2.776	26.383	95.317	1.00	79.69	C
ATOM	7216	OE1 GLN D 498	2.814	27.551	95.725	1.00	81.49	O
ATOM	7217	NE2 GLN D 498	1.968	25.482	95.863	1.00	80.48	N
ATOM	7218	N GLN D 499	5.805	23.562	92.728	1.00	68.44	N
ATOM	7219	CA GLN D 499	7.205	23.418	93.118	1.00	66.67	C
ATOM	7220	C GLN D 499	8.082	23.649	91.889	1.00	65.31	C
ATOM	7221	O GLN D 499	9.207	24.131	91.996	1.00	66.02	O
ATOM	7222	CB GLN D 499	7.498	22.012	93.605	1.00	67.59	C
ATOM	7223	CG GLN D 499	6.331	21.445	94.385	1.00	68.83	C
ATOM	7224	CD GLN D 499	6.815	20.277	95.218	1.00	69.76	C
ATOM	7225	OE1 GLN D 499	7.094	19.197	94.705	1.00	71.19	O
ATOM	7226	NE2 GLN D 499	6.905	20.540	96.506	1.00	69.95	N
ATOM	7227	N GLN D 500	7.564	23.270	90.726	1.00	62.76	N
ATOM	7228	CA GLN D 500	8.296	23.482	89.499	1.00	61.09	C
ATOM	7229	C GLN D 500	8.517	24.994	89.331	1.00	59.09	C
ATOM	7230	O GLN D 500	9.691	25.383	89.229	1.00	59.14	O
ATOM	7231	CB GLN D 500	7.540	22.919	88.315	1.00	62.27	C
ATOM	7232	CG GLN D 500	7.714	21.442	88.024	1.00	62.80	C
ATOM	7233	CD GLN D 500	6.573	20.977	87.142	1.00	63.30	C
ATOM	7234	OE1 GLN D 500	6.275	21.531	86.089	1.00	63.54	O
ATOM	7235	NE2 GLN D 500	5.917	19.943	87.634	1.00	64.24	N

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ATOM	7236	N	HIS D 501	7.460	25.821	89.335	1.00	55.25	N
ATOM	7237	CA	HIS D 501	7.725	27.245	89.161	1.00	53.44	C
ATOM	7238	C	HIS D 501	8.578	27.830	90.274	1.00	52.52	C
ATOM	7239	O	HIS D 501	9.356	28.743	89.994	1.00	51.91	O
ATOM	7240	CB	HIS D 501	6.507	28.085	88.865	1.00	53.03	C
ATOM	7241	CG	AHIS D 501	5.474	28.276	89.912	0.50	53.66	C
ATOM	7242	CG	BHIS D 501	5.437	27.455	88.041	0.50	51.41	C
ATOM	7243	ND1A	HIS D 501	4.124	28.204	89.617	0.50	53.47	N
ATOM	7244	ND1B	HIS D 501	5.702	26.917	86.806	0.50	51.22	N
ATOM	7245	CD2A	HIS D 501	5.563	28.544	91.241	0.50	53.50	C
ATOM	7246	CD2B	HIS D 501	4.117	27.267	88.250	0.50	51.01	C
ATOM	7247	CE1A	HIS D 501	3.439	28.421	90.731	0.50	53.72	C
ATOM	7248	CE1B	HIS D 501	4.601	26.420	86.278	0.50	51.20	C
ATOM	7249	NE2A	HIS D 501	4.286	28.626	91.735	0.50	53.30	N
ATOM	7250	NE2B	HIS D 501	3.622	26.621	87.139	0.50	51.32	N
ATOM	7251	N	GLN D 502	8.513	27.349	91.501	1.00	51.91	N
ATOM	7252	CA	GLN D 502	9.357	27.865	92.580	1.00	51.43	C
ATOM	7253	C	GLN D 502	10.822	27.515	92.353	1.00	50.05	C
ATOM	7254	O	GLN D 502	11.679	28.403	92.376	1.00	49.42	O
ATOM	7255	CB	GLN D 502	8.875	27.394	93.959	1.00	51.43	C
ATOM	7256	CG	GLN D 502	7.427	27.787	94.158	1.00	52.78	C
ATOM	7257	CD	GLN D 502	6.883	27.696	95.554	1.00	52.90	C
ATOM	7258	OE1	GLN D 502	7.291	26.846	96.333	1.00	53.51	O
ATOM	7259	NE2	GLN D 502	5.936	28.563	95.886	1.00	52.96	N
ATOM	7260	N	ARG D 503	11.150	26.256	92.089	1.00	48.44	N
ATOM	7261	CA	ARG D 503	12.531	25.880	91.845	1.00	47.19	C
ATOM	7262	C	ARG D 503	13.117	26.651	90.665	1.00	47.87	C
ATOM	7263	O	ARG D 503	14.262	27.078	90.756	1.00	48.75	O
ATOM	7264	CB	ARG D 503	12.635	24.395	91.513	1.00	46.54	C
ATOM	7265	CG	ARG D 503	14.058	23.885	91.653	1.00	44.30	C
ATOM	7266	CD	ARG D 503	14.070	22.370	91.656	1.00	42.85	C
ATOM	7267	NE	ARG D 503	15.441	21.927	91.475	1.00	43.48	N
ATOM	7268	CZ	ARG D 503	16.297	21.674	92.460	1.00	43.76	C
ATOM	7269	NH1	ARG D 503	15.895	21.828	93.712	1.00	43.75	N
ATOM	7270	NH2	ARG D 503	17.540	21.280	92.210	1.00	43.13	N
ATOM	7271	N	LEU D 504	12.359	26.807	89.575	1.00	46.25	N
ATOM	7272	CA	LEU D 504	12.836	27.547	88.433	1.00	44.46	C
ATOM	7273	C	LEU D 504	13.310	28.892	88.955	1.00	44.49	C
ATOM	7274	O	LEU D 504	14.475	29.212	88.795	1.00	45.62	O
ATOM	7275	CB	LEU D 504	11.779	27.824	87.360	1.00	43.71	C
ATOM	7276	CG	LEU D 504	12.247	28.469	86.045	1.00	41.27	C
ATOM	7277	CD1	LEU D 504	13.348	27.686	85.368	1.00	40.49	C
ATOM	7278	CD2	LEU D 504	11.058	28.601	85.104	1.00	41.04	C
ATOM	7279	N	ALA D 505	12.398	29.628	89.577	1.00	44.90	N
ATOM	7280	CA	ALA D 505	12.760	30.949	90.098	1.00	44.77	C

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ATOM	7281	C	ALA D 505	13.935	30.831	91.049	1.00	46.17	C
ATOM	7282	O	ALA D 505	14.905	31.602	90.909	1.00	47.56	O
ATOM	7283	CB	ALA D 505	11.568	31.603	90.719	1.00	43.37	C
ATOM	7284	N	GLN D 506	13.965	29.871	91.979	1.00	46.90	N
ATOM	7285	CA	GLN D 506	15.138	29.791	92.857	1.00	46.66	C
ATOM	7286	C	GLN D 506	16.398	29.604	92.040	1.00	46.13	C
ATOM	7287	O	GLN D 506	17.355	30.277	92.381	1.00	46.28	O
ATOM	7288	CB	GLN D 506	15.048	28.771	93.985	1.00	47.09	C
ATOM	7289	CG	AGLN D 506	13.658	28.379	94.403	0.50	48.95	C
ATOM	7290	CG	BGLN D 506	14.039	29.180	95.048	0.50	47.34	C
ATOM	7291	CD	AGLN D 506	13.468	27.457	95.579	0.50	49.86	C
ATOM	7292	CD	BGLN D 506	14.421	30.392	95.861	0.50	47.80	C
ATOM	7293	OE1	AGLN D 506	14.178	26.464	95.781	0.50	49.50	O
ATOM	7294	OE1	BGLN D 506	15.594	30.775	95.906	0.50	49.73	O
ATOM	7295	NE2	AGLN D 506	12.458	27.779	96.403	0.50	50.31	N
ATOM	7296	NE2	BGLN D 506	13.478	31.033	96.532	0.50	46.96	N
ATOM	7297	N	LEU D 507	16.442	28.769	91.020	1.00	47.10	N
ATOM	7298	CA	LEU D 507	17.630	28.522	90.212	1.00	46.22	C
ATOM	7299	C	LEU D 507	18.072	29.759	89.476	1.00	45.72	C
ATOM	7300	O	LEU D 507	19.222	30.170	89.663	1.00	46.37	O
ATOM	7301	CB	LEU D 507	17.440	27.379	89.226	1.00	47.36	C
ATOM	7302	CG	LEU D 507	17.296	25.982	89.869	1.00	48.45	C
ATOM	7303	CD1	LEU D 507	17.113	24.922	88.794	1.00	48.53	C
ATOM	7304	CD2	LEU D 507	18.489	25.671	90.748	1.00	48.16	C
ATOM	7305	N	LEU D 508	17.175	30.375	88.718	1.00	45.02	N
ATOM	7306	CA	LEU D 508	17.519	31.627	88.020	1.00	43.68	C
ATOM	7307	C	LEU D 508	17.894	32.743	88.967	1.00	43.09	C
ATOM	7308	O	LEU D 508	18.818	33.502	88.632	1.00	44.39	O
ATOM	7309	CB	LEU D 508	16.386	32.016	87.074	1.00	43.56	C
ATOM	7310	CG	LEU D 508	16.053	30.912	86.054	1.00	43.99	C
ATOM	7311	CD1	LEU D 508	14.857	31.299	85.202	1.00	45.21	C
ATOM	7312	CD2	LEU D 508	17.215	30.636	85.129	1.00	43.98	C
ATOM	7313	N	LEU D 509	17.333	32.928	90.171	1.00	41.34	N
ATOM	7314	CA	LEU D 509	17.822	34.022	91.004	1.00	39.74	C
ATOM	7315	C	LEU D 509	19.286	33.882	91.406	1.00	41.27	C
ATOM	7316	O	LEU D 509	19.972	34.901	91.623	1.00	40.74	O
ATOM	7317	CB	LEU D 509	16.934	34.266	92.197	1.00	38.02	C
ATOM	7318	CG	LEU D 509	15.572	34.870	91.926	1.00	37.73	C
ATOM	7319	CD1	LEU D 509	14.767	34.910	93.218	1.00	39.12	C
ATOM	7320	CD2	LEU D 509	15.677	36.266	91.374	1.00	37.20	C
ATOM	7321	N	ILE D 510	19.853	32.668	91.506	1.00	42.09	N
ATOM	7322	CA	ILE D 510	21.254	32.479	91.867	1.00	41.40	C
ATOM	7323	C	ILE D 510	22.109	33.098	90.761	1.00	40.98	C
ATOM	7324	O	ILE D 510	23.190	33.619	91.031	1.00	40.56	O
ATOM	7325	CB	ILE D 510	21.603	31.003	92.070	1.00	41.68	C

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ATOM	7326	CG1 ILE D 510	21.260	30.521	93.473	1.00	42.78	C
ATOM	7327	CG2 ILE D 510	23.086	30.720	91.924	1.00	42.12	C
ATOM	7328	CD1 ILE D 510	20.643	29.129	93.534	1.00	44.12	C
ATOM	7329	N LEU D 511	21.639	33.084	89.512	1.00	39.99	N
ATOM	7330	CA LEU D 511	22.399	33.641	88.413	1.00	40.71	C
ATOM	7331	C LEU D 511	22.747	35.095	88.658	1.00	41.31	C
ATOM	7332	O LEU D 511	23.811	35.561	88.243	1.00	42.30	O
ATOM	7333	CB LEU D 511	21.713	33.454	87.078	1.00	41.31	C
ATOM	7334	CG LEU D 511	21.424	32.018	86.627	1.00	40.18	C
ATOM	7335	CD1 LEU D 511	20.905	32.093	85.196	1.00	40.47	C
ATOM	7336	CD2 LEU D 511	22.649	31.144	86.777	1.00	38.30	C
ATOM	7337	N SER D 512	21.918	35.851	89.341	1.00	41.45	N
ATOM	7338	CA SER D 512	22.208	37.220	89.696	1.00	41.06	C
ATOM	7339	C SER D 512	23.438	37.271	90.603	1.00	41.07	C
ATOM	7340	O SER D 512	24.319	38.107	90.419	1.00	42.29	O
ATOM	7341	CB SER D 512	21.050	37.699	90.583	1.00	42.28	C
ATOM	7342	OG SER D 512	20.792	39.009	90.103	1.00	46.01	O
ATOM	7343	N HIS D 513	23.516	36.375	91.602	1.00	39.13	N
ATOM	7344	CA HIS D 513	24.667	36.326	92.494	1.00	37.67	C
ATOM	7345	C HIS D 513	25.909	35.969	91.689	1.00	37.57	C
ATOM	7346	O HIS D 513	26.965	36.614	91.811	1.00	37.05	O
ATOM	7347	CB HIS D 513	24.431	35.404	93.701	1.00	37.16	C
ATOM	7348	CG AHIS D 513	23.296	36.096	94.421	0.50	37.87	C
ATOM	7349	CG BHIS D 513	25.455	35.520	94.790	0.50	37.66	C
ATOM	7350	ND1AHIS D 513	22.007	35.629	94.434	0.50	38.32	N
ATOM	7351	ND1BHIS D 513	26.189	34.437	95.249	0.50	37.48	N
ATOM	7352	CD2AHIS D 513	23.271	37.255	95.114	0.50	38.08	C
ATOM	7353	CD2BHIS D 513	25.857	36.587	95.544	0.50	37.49	C
ATOM	7354	CE1AHIS D 513	21.235	36.493	95.087	0.50	37.64	C
ATOM	7355	CE1BHIS D 513	27.001	34.839	96.222	0.50	37.37	C
ATOM	7356	NE2AHIS D 513	21.983	37.457	95.547	0.50	37.37	N
ATOM	7357	NE2BHIS D 513	26.819	36.136	96.423	0.50	37.28	N
ATOM	7358	N ILE D 514	25.801	34.973	90.818	1.00	36.05	N
ATOM	7359	CA ILE D 514	26.949	34.627	89.996	1.00	36.78	C
ATOM	7360	C ILE D 514	27.359	35.830	89.178	1.00	37.22	C
ATOM	7361	O ILE D 514	28.557	36.102	89.102	1.00	37.31	O
ATOM	7362	CB ILE D 514	26.605	33.395	89.163	1.00	38.42	C
ATOM	7363	CG1 ILE D 514	26.580	32.195	90.138	1.00	38.53	C
ATOM	7364	CG2 ILE D 514	27.569	33.170	88.010	1.00	38.28	C
ATOM	7365	CD1 ILE D 514	25.727	31.080	89.564	1.00	38.48	C
ATOM	7366	N ARG D 515	26.461	36.624	88.596	1.00	37.86	N
ATOM	7367	CA ARG D 515	26.886	37.823	87.868	1.00	38.79	C
ATOM	7368	C ARG D 515	27.661	38.738	88.823	1.00	39.14	C
ATOM	7369	O ARG D 515	28.765	39.180	88.530	1.00	38.97	O
ATOM	7370	CB ARG D 515	25.698	38.606	87.335	1.00	40.22	C

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ATOM	7371	CG ARG D 515	25.964	39.720	86.348	1.00	41.19	C
ATOM	7372	CD ARG D 515	26.725	39.171	85.178	1.00	43.85	C
ATOM	7373	NE ARG D 515	26.444	39.825	83.910	1.00	46.95	N
ATOM	7374	CZ ARG D 515	25.285	39.669	83.252	1.00	48.65	C
ATOM	7375	NH1 ARG D 515	24.316	38.902	83.763	1.00	49.45	N
ATOM	7376	NH2 ARG D 515	25.084	40.282	82.094	1.00	47.46	N
ATOM	7377	N HIS D 516	27.052	38.995	89.992	1.00	38.38	N
ATOM	7378	CA HIS D 516	27.660	39.818	90.996	1.00	37.85	C
ATOM	7379	C HIS D 516	29.072	39.360	91.291	1.00	37.55	C
ATOM	7380	O HIS D 516	29.968	40.163	91.276	1.00	36.74	O
ATOM	7381	CB HIS D 516	26.818	39.786	92.291	1.00	39.61	C
ATOM	7382	CG HIS D 516	27.422	40.770	93.284	1.00	40.17	C
ATOM	7383	ND1 HIS D 516	27.303	42.123	93.140	1.00	38.53	N
ATOM	7384	CD2 HIS D 516	28.185	40.545	94.389	1.00	39.81	C
ATOM	7385	CE1 HIS D 516	27.972	42.694	94.116	1.00	38.90	C
ATOM	7386	NE2 HIS D 516	28.515	41.779	94.889	1.00	39.17	N
ATOM	7387	N MET D 517	29.308	38.098	91.570	1.00	39.24	N
ATOM	7388	CA MET D 517	30.580	37.507	91.916	1.00	40.40	C
ATOM	7389	C MET D 517	31.649	37.666	90.859	1.00	39.91	C
ATOM	7390	O MET D 517	32.813	37.952	91.101	1.00	38.93	O
ATOM	7391	CB MET D 517	30.453	35.985	92.097	1.00	41.27	C
ATOM	7392	CG MET D 517	30.490	35.597	93.567	1.00	43.25	C
ATOM	7393	SD MET D 517	30.050	33.854	93.738	1.00	44.22	S
ATOM	7394	CE MET D 517	28.337	33.970	93.387	1.00	47.47	C
ATOM	7395	N SER D 518	31.173	37.442	89.643	1.00	40.31	N
ATOM	7396	CA SER D 518	32.064	37.531	88.481	1.00	41.20	C
ATOM	7397	C SER D 518	32.537	38.966	88.321	1.00	42.17	C
ATOM	7398	O SER D 518	33.690	39.161	87.915	1.00	42.21	O
ATOM	7399	CB SER D 518	31.366	37.005	87.257	1.00	41.21	C
ATOM	7400	OG SER D 518	31.562	37.715	86.078	1.00	41.31	O
ATOM	7401	N ASN D 519	31.667	39.925	88.635	1.00	42.75	N
ATOM	7402	CA ASN D 519	32.001	41.336	88.532	1.00	43.47	C
ATOM	7403	C ASN D 519	33.082	41.623	89.552	1.00	43.96	C
ATOM	7404	O ASN D 519	34.106	42.224	89.227	1.00	45.90	O
ATOM	7405	CB ASN D 519	30.773	42.212	88.704	1.00	45.72	C
ATOM	7406	CG ASN D 519	29.906	42.312	87.465	1.00	48.34	C
ATOM	7407	OD1 ASN D 519	30.433	42.232	86.335	1.00	51.35	O
ATOM	7408	ND2 ASN D 519	28.591	42.475	87.558	1.00	47.75	N
ATOM	7409	N LYS D 520	32.970	41.156	90.775	1.00	43.93	N
ATOM	7410	CA LYS D 520	34.010	41.360	91.767	1.00	45.03	C
ATOM	7411	C LYS D 520	35.271	40.619	91.348	1.00	45.05	C
ATOM	7412	O LYS D 520	36.383	41.107	91.461	1.00	44.85	O
ATOM	7413	CB LYS D 520	33.536	40.828	93.112	1.00	46.49	C
ATOM	7414	CG LYS D 520	32.109	41.316	93.328	1.00	49.34	C
ATOM	7415	CD LYS D 520	32.209	42.590	94.138	1.00	53.12	C

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ATOM 7416 CE LYS D 520	31.685 43.833 93.425 1.00 55.68	C
ATOM 7417 NZ LYS D 520	32.165 45.060 94.170 1.00 57.32	N
ATOM 7418 N GLY D 521	35.100 39.398 90.850 1.00 44.99	N
ATOM 7419 CA GLY D 521	36.244 38.630 90.408 1.00 45.07	C
ATOM 7420 C GLY D 521	37.027 39.378 89.335 1.00 45.97	C
ATOM 7421 O GLY D 521	38.255 39.361 89.546 1.00 46.47	O
ATOM 7422 N MET D 522	36.453 39.964 88.263 1.00 45.24	N
ATOM 7423 CA MET D 522	37.330 40.608 87.313 1.00 46.17	C
ATOM 7424 C MET D 522	37.977 41.811 88.008 1.00 47.57	C
ATOM 7425 O MET D 522	39.153 42.032 87.754 1.00 48.86	O
ATOM 7426 CB MET D 522	36.883 41.251 86.040 1.00 46.68	C
ATOM 7427 CG MET D 522	35.743 40.908 85.172 1.00 47.01	C
ATOM 7428 SD MET D 522	36.052 39.568 84.026 1.00 47.12	S
ATOM 7429 CE MET D 522	37.801 39.701 83.767 1.00 45.10	C
ATOM 7430 N GLU D 523	37.206 42.542 88.805 1.00 48.67	N
ATOM 7431 CA GLU D 523	37.853 43.687 89.453 1.00 49.92	C
ATOM 7432 C GLU D 523	39.105 43.238 90.179 1.00 46.61	C
ATOM 7433 O GLU D 523	40.127 43.870 90.038 1.00 46.10	O
ATOM 7434 CB GLU D 523	36.858 44.389 90.334 1.00 56.37	C
ATOM 7435 CG GLU D 523	36.040 45.451 89.644 1.00 63.92	C
ATOM 7436 CD GLU D 523	36.859 46.494 88.902 1.00 68.65	C
ATOM 7437 OE1 GLU D 523	38.084 46.628 89.154 1.00 70.98	O
ATOM 7438 OE2 GLU D 523	36.213 47.184 88.057 1.00 71.61	O
ATOM 7439 N HIS D 524	39.085 42.164 90.931 1.00 44.00	N
ATOM 7440 CA HIS D 524	40.206 41.623 91.631 1.00 42.73	C
ATOM 7441 C HIS D 524	41.280 41.100 90.706 1.00 43.91	C
ATOM 7442 O HIS D 524	42.462 41.370 90.874 1.00 43.70	O
ATOM 7443 CB HIS D 524	39.722 40.452 92.478 1.00 42.39	C
ATOM 7444 CG HIS D 524	40.786 39.709 93.209 1.00 42.67	C
ATOM 7445 ND1 HIS D 524	41.535 38.688 92.672 1.00 43.20	N
ATOM 7446 CD2 HIS D 524	41.257 39.812 94.461 1.00 43.18	C
ATOM 7447 CE1 HIS D 524	42.409 38.233 93.536 1.00 42.46	C
ATOM 7448 NE2 HIS D 524	42.260 38.896 94.651 1.00 42.25	N
ATOM 7449 N LEU D 525	40.964 40.309 89.687 1.00 45.58	N
ATOM 7450 CA LEU D 525	41.967 39.726 88.807 1.00 47.55	C
ATOM 7451 C LEU D 525	42.777 40.855 88.195 1.00 50.31	C
ATOM 7452 O LEU D 525	43.968 40.797 87.964 1.00 50.79	O
ATOM 7453 CB LEU D 525	41.392 38.854 87.698 1.00 46.07	C
ATOM 7454 CG LEU D 525	42.393 38.273 86.703 1.00 44.46	C
ATOM 7455 CD1 LEU D 525	43.376 37.351 87.404 1.00 43.93	C
ATOM 7456 CD2 LEU D 525	41.671 37.541 85.593 1.00 43.69	C
ATOM 7457 N TYR D 526	42.062 41.918 87.912 1.00 53.91	N
ATOM 7458 CA TYR D 526	42.581 43.132 87.344 1.00 57.32	C
ATOM 7459 C TYR D 526	43.546 43.787 88.302 1.00 58.27	C
ATOM 7460 O TYR D 526	44.621 44.138 87.853 1.00 59.84	O

ATOM	7461	CB	TYR D 526	41.390	44.042	87.053	1.00	60.15	C
ATOM	7462	CG	TYR D 526	41.932	45.244	86.335	1.00	63.64	C
ATOM	7463	CD1	TYR D 526	42.249	45.198	84.998	1.00	65.55	C
ATOM	7464	CD2	TYR D 526	42.129	46.406	87.048	1.00	66.34	C
ATOM	7465	CE1	TYR D 526	42.746	46.304	84.358	1.00	68.59	C
ATOM	7466	CE2	TYR D 526	42.627	47.536	86.427	1.00	69.20	C
ATOM	7467	CZ	TYR D 526	42.931	47.462	85.084	1.00	70.56	C
ATOM	7468	OH	TYR D 526	43.436	48.593	84.456	1.00	74.25	O
ATOM	7469	N	SER D 527	43.255	43.967	89.576	1.00	59.32	N
ATOM	7470	CA	SER D 527	44.255	44.586	90.448	1.00	59.93	C
ATOM	7471	C	SER D 527	45.376	43.584	90.547	1.00	60.32	C
ATOM	7472	O	SER D 527	46.487	43.991	90.251	1.00	61.06	O
ATOM	7473	CB	SER D 527	43.724	44.976	91.807	1.00	60.86	C
ATOM	7474	OG	SER D 527	42.797	44.017	92.232	1.00	61.54	O
ATOM	7475	N	MET D 528	45.169	42.313	90.847	1.00	61.53	N
ATOM	7476	CA	MET D 528	46.251	41.333	90.857	1.00	62.36	C
ATOM	7477	C	MET D 528	47.166	41.533	89.653	1.00	62.77	C
ATOM	7478	O	MET D 528	48.372	41.450	89.750	1.00	61.53	O
ATOM	7479	CB	MET D 528	45.718	39.898	90.826	1.00	61.94	C
ATOM	7480	CG	MET D 528	45.345	39.326	92.165	1.00	62.28	C
ATOM	7481	SD	MET D 528	46.261	40.019	93.550	1.00	61.77	S
ATOM	7482	CE	MET D 528	45.204	41.300	94.128	1.00	62.23	C
ATOM	7483	N	LYS D 529	46.668	41.789	88.469	1.00	65.65	N
ATOM	7484	CA	LYS D 529	47.460	42.021	87.277	1.00	69.46	C
ATOM	7485	C	LYS D 529	48.223	43.330	87.363	1.00	71.42	C
ATOM	7486	O	LYS D 529	49.378	43.413	86.970	1.00	72.35	O
ATOM	7487	CB	LYS D 529	46.553	42.035	86.056	1.00	70.35	C
ATOM	7488	CG	LYS D 529	46.771	43.105	85.032	1.00	71.75	C
ATOM	7489	CD	LYS D 529	46.831	42.513	83.640	1.00	73.98	C
ATOM	7490	CE	LYS D 529	46.902	43.611	82.594	1.00	76.40	C
ATOM	7491	NZ	LYS D 529	46.006	44.770	82.900	1.00	77.90	N
ATOM	7492	N	CYS D 530	47.612	44.382	87.854	1.00	74.21	N
ATOM	7493	CA	CYS D 530	48.254	45.681	87.999	1.00	77.57	C
ATOM	7494	C	CYS D 530	49.353	45.605	89.026	1.00	79.44	C
ATOM	7495	O	CYS D 530	50.447	46.152	88.853	1.00	80.55	O
ATOM	7496	CB	CYS D 530	47.169	46.727	88.262	1.00	78.80	C
ATOM	7497	SG	ACYS D 530	46.091	46.863	86.788	0.50	79.29	S
ATOM	7498	SG	BCYS D 530	47.201	48.100	87.084	0.50	81.53	S
ATOM	7499	N	LYS D 531	49.221	44.834	90.100	1.00	81.23	N
ATOM	7500	CA	LYS D 531	50.257	44.628	91.093	1.00	82.83	C
ATOM	7501	C	LYS D 531	51.369	43.752	90.528	1.00	84.21	C
ATOM	7502	O	LYS D 531	52.363	43.447	91.183	1.00	85.33	O
ATOM	7503	CB	LYS D 531	49.669	43.925	92.311	1.00	83.36	C
ATOM	7504	CG	LYS D 531	49.065	44.815	93.366	1.00	84.89	C
ATOM	7505	CD	LYS D 531	48.013	45.777	92.823	1.00	85.64	C

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ATOM 7508 N ASN D 532	51.263 43.253 89.316 1.00 85.75	N
ATOM 7509 CA ASN D 532	52.214 42.377 88.674 1.00 87.67	C
ATOM 7510 C ASN D 532	52.414 41.123 89.498 1.00 86.83	C
ATOM 7511 O ASN D 532	53.503 40.824 89.973 1.00 88.13	O
ATOM 7512 CB ASN D 532	53.540 43.116 88.492 1.00 91.44	C
ATOM 7513 CG ASN D 532	53.396 44.210 87.448 1.00 95.11	C
ATOM 7514 OD1 ASN D 532	52.743 43.976 86.413 1.00 96.83	O
ATOM 7515 ND2 ASN D 532	53.984 45.380 87.725 1.00 96.52	N
ATOM 7516 N VAL D 533	51.372 40.355 89.738 1.00 85.40	N
ATOM 7517 CA VAL D 533	51.384 39.134 90.532 1.00 83.94	C
ATOM 7518 C VAL D 533	50.924 37.951 89.675 1.00 83.81	C
ATOM 7519 O VAL D 533	51.168 36.756 89.856 1.00 84.37	O
ATOM 7520 CB VAL D 533	50.376 39.287 91.689 1.00 83.16	C
ATOM 7521 CG1 VAL D 533	50.469 38.081 92.594 1.00 83.74	C
ATOM 7522 CG2 VAL D 533	50.551 40.567 92.473 1.00 82.60	C
ATOM 7523 N VAL D 534	50.172 38.318 88.640 1.00 82.67	N
ATOM 7524 CA VAL D 534	49.598 37.434 87.666 1.00 81.37	C
ATOM 7525 C VAL D 534	50.520 37.295 86.464 1.00 80.71	C
ATOM 7526 O VAL D 534	50.947 38.270 85.846 1.00 79.76	O
ATOM 7527 CB VAL D 534	48.261 38.000 87.145 1.00 81.77	C
ATOM 7528 CG1 VAL D 534	47.647 37.281 85.967 1.00 81.40	C
ATOM 7529 CG2 VAL D 534	47.263 38.076 88.282 1.00 82.95	C
ATOM 7530 N PRO D 535	50.788 36.051 86.118 1.00 80.27	N
ATOM 7531 CA PRO D 535	51.570 35.696 84.968 1.00 80.35	C
ATOM 7532 C PRO D 535	50.835 36.148 83.705 1.00 81.79	C
ATOM 7533 O PRO D 535	49.647 36.476 83.597 1.00 81.91	O
ATOM 7534 CB PRO D 535	51.709 34.172 84.941 1.00 79.80	C
ATOM 7535 CG PRO D 535	51.017 33.727 86.177 1.00 79.58	C
ATOM 7536 CD PRO D 535	50.276 34.869 86.810 1.00 80.22	C
ATOM 7537 N LEU D 536	51.630 36.118 82.638 1.00 83.19	N
ATOM 7538 CA LEU D 536	51.243 36.490 81.306 1.00 83.84	C
ATOM 7539 C LEU D 536	50.532 35.437 80.481 1.00 83.18	C
ATOM 7540 O LEU D 536	50.977 35.207 79.347 1.00 85.15	O
ATOM 7545 N TYR D 537	49.468 34.835 80.990 1.00 80.74	N
ATOM 7546 CA TYR D 537	48.744 33.854 80.189 1.00 77.68	C
ATOM 7547 C TYR D 537	47.933 34.693 79.202 1.00 75.48	C
ATOM 7548 O TYR D 537	47.192 35.577 79.597 1.00 74.48	O
ATOM 7549 CB TYR D 537	47.865 32.974 81.033 1.00 78.11	C
ATOM 7550 CG TYR D 537	48.632 32.199 82.075 1.00 78.38	C
ATOM 7551 CD1 TYR D 537	49.603 31.297 81.691 1.00 79.18	C
ATOM 7552 CD2 TYR D 537	48.385 32.348 83.424 1.00 78.50	C
ATOM 7553 CE1 TYR D 537	50.311 30.557 82.619 1.00 79.58	C
ATOM 7554 CE2 TYR D 537	49.095 31.609 84.339 1.00 78.93	C
ATOM 7555 CZ TYR D 537	50.052 30.717 83.956 1.00 79.10	C
ATOM 7556 OH TYR D 537	50.760 29.987 84.870 1.00 79.09	O

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ATOM 7557 N ASP D 538	48.135 34.396 77.933 1.00 73.43	N
ATOM 7558 CA ASP D 538	47.485 35.097 76.862 1.00 71.14	C
ATOM 7559 C ASP D 538	45.987 35.009 76.728 1.00 66.94	C
ATOM 7560 O ASP D 538	45.371 36.056 76.506 1.00 66.97	O
ATOM 7561 CB ASP D 538	48.112 34.546 75.573 1.00 76.06	C
ATOM 7562 CG ASP D 538	49.333 35.379 75.241 1.00 80.52	C
ATOM 7563 OD1 ASP D 538	49.297 36.609 75.511 1.00 83.41	O
ATOM 7564 OD2 ASP D 538	50.312 34.803 74.721 1.00 83.00	O
ATOM 7565 N LEU D 539	45.402 33.822 76.815 1.00 61.50	N
ATOM 7566 CA LEU D 539	43.949 33.698 76.631 1.00 56.68	C
ATOM 7567 C LEU D 539	43.198 34.354 77.772 1.00 55.11	C
ATOM 7568 O LEU D 539	42.140 34.957 77.563 1.00 54.75	O
ATOM 7569 CB LEU D 539	43.587 32.246 76.374 1.00 53.99	C
ATOM 7570 CG LEU D 539	42.176 31.839 76.024 1.00 51.86	C
ATOM 7571 CD1 LEU D 539	41.595 32.693 74.914 1.00 51.90	C
ATOM 7572 CD2 LEU D 539	42.139 30.375 75.652 1.00 51.00	C
ATOM 7573 N LEU D 540	43.748 34.251 78.975 1.00 53.46	N
ATOM 7574 CA LEU D 540	43.192 34.833 80.182 1.00 51.65	C
ATOM 7575 C LEU D 540	43.300 36.353 80.115 1.00 51.90	C
ATOM 7576 O LEU D 540	42.338 37.036 80.461 1.00 51.40	O
ATOM 7577 CB LEU D 540	43.870 34.292 81.437 1.00 49.81	C
ATOM 7578 CG LEU D 540	43.283 34.798 82.757 1.00 49.22	C
ATOM 7579 CD1 LEU D 540	41.996 34.063 83.099 1.00 48.02	C
ATOM 7580 CD2 LEU D 540	44.251 34.717 83.918 1.00 47.83	C
ATOM 7581 N LEU D 541	44.395 36.924 79.627 1.00 52.89	N
ATOM 7582 CA LEU D 541	44.461 38.378 79.526 1.00 54.36	C
ATOM 7583 C LEU D 541	43.513 38.857 78.442 1.00 53.66	C
ATOM 7584 O LEU D 541	42.957 39.961 78.564 1.00 55.08	O
ATOM 7585 CB LEU D 541	45.882 38.908 79.365 1.00 56.82	C
ATOM 7586 CG LEU D 541	46.746 38.458 80.562 1.00 59.61	C
ATOM 7587 CD1 LEU D 541	48.213 38.814 80.410 1.00 60.75	C
ATOM 7588 CD2 LEU D 541	46.199 38.946 81.895 1.00 59.95	C
ATOM 7589 N GLU D 542	43.283 38.046 77.436 1.00 52.05	N
ATOM 7590 CA GLU D 542	42.359 38.419 76.378 1.00 52.01	C
ATOM 7591 C GLU D 542	40.962 38.558 76.964 1.00 51.81	C
ATOM 7592 O GLU D 542	40.343 39.603 76.763 1.00 52.56	O
ATOM 7593 CB GLU D 542	42.374 37.375 75.286 1.00 52.93	C
ATOM 7594 CG GLU D 542	41.504 37.629 74.073 1.00 54.03	C
ATOM 7595 CD GLU D 542	41.813 36.554 73.045 1.00 55.61	C
ATOM 7596 OE1 GLU D 542	43.002 36.118 73.040 1.00 56.51	O
ATOM 7597 OE2 GLU D 542	40.862 36.198 72.325 1.00 55.79	O
ATOM 7598 N MET D 543	40.460 37.558 77.678 1.00 50.53	N
ATOM 7599 CA MET D 543	39.128 37.617 78.249 1.00 48.98	C
ATOM 7600 C MET D 543	39.009 38.734 79.250 1.00 49.90	C
ATOM 7601 O MET D 543	37.965 39.392 79.390 1.00 50.42	O

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ATOM 7602 CB MET D 543	38.864 36.247 78.858 1.00 49.15	C
ATOM 7603 CG MET D 543	39.038 35.161 77.798 1.00 49.35	C
ATOM 7604 SD MET D 543	37.661 35.157 76.652 1.00 49.50	S
ATOM 7605 CE MET D 543	38.446 35.461 75.101 1.00 50.34	C
ATOM 7606 N LEU D 544	40.084 38.981 80.006 1.00 50.40	N
ATOM 7607 CA LEU D 544	40.087 40.046 81.006 1.00 49.64	C
ATOM 7608 C LEU D 544	40.020 41.371 80.274 1.00 51.52	C
ATOM 7609 O LEU D 544	39.243 42.187 80.742 1.00 51.84	O
ATOM 7610 CB LEU D 544	41.266 39.974 81.932 1.00 47.56	C
ATOM 7611 CG LEU D 544	41.587 41.124 82.855 1.00 46.86	C
ATOM 7612 CD1 LEU D 544	40.531 41.407 83.893 1.00 47.36	C
ATOM 7613 CD2 LEU D 544	42.858 40.857 83.633 1.00 46.52	C
ATOM 7614 N ASP D 545	40.742 41.598 79.188 1.00 54.73	N
ATOM 7615 CA ASP D 545	40.657 42.868 78.490 1.00 58.31	C
ATOM 7616 C ASP D 545	39.293 43.125 77.904 1.00 58.22	C
ATOM 7617 O ASP D 545	38.857 44.265 77.953 1.00 58.37	O
ATOM 7618 CB ASP D 545	41.660 43.039 77.359 1.00 63.15	C
ATOM 7619 CG ASP D 545	43.086 43.066 77.858 1.00 68.13	C
ATOM 7620 OD1 ASP D 545	43.347 43.145 79.089 1.00 71.17	O
ATOM 7621 OD2 ASP D 545	44.001 43.000 76.998 1.00 70.50	O
ATOM 7622 N ALA D 546	38.569 42.144 77.404 1.00 59.16	N
ATOM 7623 CA ALA D 546	37.246 42.333 76.848 1.00 59.75	C
ATOM 7624 C ALA D 546	36.414 43.173 77.792 1.00 61.95	C
ATOM 7625 O ALA D 546	35.707 44.069 77.382 1.00 62.80	O
ATOM 7626 CB ALA D 546	36.535 41.025 76.647 1.00 59.19	C
ATOM 7627 N HIS D 547	36.464 42.895 79.070 1.00 65.29	N
ATOM 7628 CA HIS D 547	35.762 43.580 80.115 1.00 68.19	C
ATOM 7629 C HIS D 547	36.237 44.968 80.398 1.00 72.31	C
ATOM 7630 O HIS D 547	35.418 45.857 80.570 1.00 74.57	O
ATOM 7631 CB HIS D 547	35.976 42.771 81.426 1.00 66.78	C
ATOM 7632 CG HIS D 547	34.987 41.661 81.222 1.00 65.39	C
ATOM 7633 ND1 HIS D 547	33.769 41.664 81.821 1.00 65.32	N
ATOM 7634 CD2 HIS D 547	35.060 40.566 80.449 1.00 65.37	C
ATOM 7635 CE1 HIS D 547	33.120 40.581 81.432 1.00 65.79	C
ATOM 7636 NE2 HIS D 547	33.870 39.902 80.597 1.00 65.28	N
ATOM 7637 N ARG D 548	37.527 45.178 80.481 1.00 77.80	N
ATOM 7638 CA ARG D 548	38.011 46.541 80.764 1.00 83.04	C
ATOM 7639 C ARG D 548	37.660 47.467 79.610 1.00 83.91	C
ATOM 7640 O ARG D 548	37.280 46.990 78.509 1.00 84.82	O
ATOM 7641 CB ARG D 548	39.503 46.486 81.078 1.00 86.73	C
ATOM 7642 CG ARG D 548	40.043 45.244 81.771 1.00 89.93	C
ATOM 7643 CD ARG D 548	39.378 44.840 83.060 1.00 92.30	C
ATOM 7644 NE ARG D 548	38.731 45.876 83.855 1.00 94.50	N
ATOM 7645 CZ ARG D 548	37.818 45.692 84.809 1.00 95.18	C
ATOM 7646 NH1 ARG D 548	37.364 44.508 85.174 1.00 95.90	N

ATOM 7647 NH2 ARG D 548	37.326	46.741	85.440	1.00	95.55	N
TER 7648 ARG D 548						
HETATM 7649 C1 EST D 600	40.094	29.783	88.544	1.00	35.42	C
HETATM 7650 C2 EST D 600	39.609	28.605	87.970	1.00	37.10	C
HETATM 7651 C3 EST D 600	38.284	28.306	88.112	1.00	38.08	C
HETATM 7652 O3 EST D 600	37.791	27.149	87.568	1.00	39.71	O
HETATM 7653 C4 EST D 600	37.364	29.111	88.801	1.00	37.36	C
HETATM 7654 C5 EST D 600	37.875	30.301	89.361	1.00	36.45	C
HETATM 7655 C6 EST D 600	36.954	31.006	90.323	1.00	36.00	C
HETATM 7656 C7 EST D 600	37.659	32.135	91.080	1.00	35.08	C
HETATM 7657 C8 EST D 600	38.649	32.851	90.198	1.00	33.93	C
HETATM 7658 C9 EST D 600	39.773	31.877	89.830	1.00	34.03	C
HETATM 7659 C10 EST D 600	39.229	30.633	89.231	1.00	34.86	C
HETATM 7660 C11 EST D 600	40.843	32.524	88.969	1.00	34.70	C
HETATM 7661 C12 EST D 600	41.482	33.712	89.730	1.00	34.68	C
HETATM 7662 C13 EST D 600	40.358	34.712	90.066	1.00	34.81	C
HETATM 7663 C14 EST D 600	39.274	33.993	90.916	1.00	34.39	C
HETATM 7664 C15 EST D 600	38.441	35.195	91.345	1.00	35.06	C
HETATM 7665 C16 EST D 600	39.571	36.111	91.977	1.00	34.28	C
HETATM 7666 C17 EST D 600	40.746	35.820	91.048	1.00	34.55	C
HETATM 7667 O17 EST D 600	41.355	36.988	90.563	1.00	34.28	O
HETATM 7668 C18 EST D 600	39.825	35.299	88.774	1.00	32.87	C
ATOM 7669 N SER E 305	66.664	39.609	24.082	1.00	90.13	N
ATOM 7670 CA SER E 305	66.219	40.728	24.958	1.00	89.20	C
ATOM 7671 C SER E 305	67.314	41.258	25.867	1.00	88.52	C
ATOM 7672 O SER E 305	67.943	40.498	26.603	1.00	88.14	O
ATOM 7673 CB SER E 305	65.012	40.240	25.772	1.00	89.12	C
ATOM 7674 OG SER E 305	64.518	41.250	26.629	1.00	89.17	O
ATOM 7675 N LEU E 306	67.515	42.577	25.872	1.00	88.09	N
ATOM 7676 CA LEU E 306	68.491	43.194	26.776	1.00	87.38	C
ATOM 7677 C LEU E 306	68.152	42.634	28.161	1.00	86.17	C
ATOM 7678 O LEU E 306	68.964	42.011	28.838	1.00	86.28	O
ATOM 7679 CB LEU E 306	68.412	44.719	26.769	1.00	87.54	C
ATOM 7683 N ALA E 307	66.897	42.808	28.562	1.00	84.21	N
ATOM 7684 CA ALA E 307	66.416	42.301	29.824	1.00	82.98	C
ATOM 7685 C ALA E 307	67.160	41.033	30.203	1.00	81.72	C
ATOM 7686 O ALA E 307	67.884	41.044	31.195	1.00	81.98	O
ATOM 7687 CB ALA E 307	64.934	41.958	29.746	1.00	83.87	C
ATOM 7688 N LEU E 308	67.010	39.986	29.409	1.00	80.54	N
ATOM 7689 CA LEU E 308	67.654	38.722	29.711	1.00	80.61	C
ATOM 7690 C LEU E 308	69.161	38.703	29.707	1.00	81.30	C
ATOM 7691 O LEU E 308	69.724	37.659	30.049	1.00	82.75	O
ATOM 7692 CB LEU E 308	67.085	37.650	28.782	1.00	80.17	C
ATOM 7693 CG LEU E 308	65.577	37.475	28.851	1.00	81.19	C
ATOM 7694 CD1 LEU E 308	65.154	36.148	28.222	1.00	81.69	C

ATOM	7695	CD2 LEU E 308	65.053	37.544	30.286	1.00	81.62	C
ATOM	7696	N SER E 309	69.908	39.736	29.387	1.00	80.88	N
ATOM	7697	CA SER E 309	71.347	39.770	29.359	1.00	80.22	C
ATOM	7698	C SER E 309	71.999	40.597	30.445	1.00	78.84	C
ATOM	7699	O SER E 309	73.155	40.377	30.811	1.00	79.47	O
ATOM	7700	CB SER E 309	71.753	40.479	28.045	1.00	81.59	C
ATOM	7701	OG SER E 309	70.952	39.844	27.041	1.00	84.79	O
ATOM	7702	N LEU E 310	71.283	41.600	30.940	1.00	77.00	N
ATOM	7703	CA LEU E 310	71.887	42.438	31.972	1.00	74.38	C
ATOM	7704	C LEU E 310	72.143	41.592	33.215	1.00	72.92	C
ATOM	7705	O LEU E 310	71.526	40.578	33.479	1.00	72.38	O
ATOM	7706	CB LEU E 310	71.076	43.676	32.277	1.00	73.94	C
ATOM	7707	CG LEU E 310	70.244	44.241	31.131	1.00	73.26	C
ATOM	7708	CD1 LEU E 310	68.782	44.089	31.487	1.00	73.44	C
ATOM	7709	CD2 LEU E 310	70.608	45.687	30.897	1.00	74.10	C
ATOM	7710	N THR E 311	73.126	42.065	33.953	1.00	71.49	N
ATOM	7711	CA THR E 311	73.553	41.413	35.178	1.00	70.53	C
ATOM	7712	C THR E 311	72.746	42.059	36.275	1.00	69.73	C
ATOM	7713	O THR E 311	72.361	43.205	36.053	1.00	68.45	O
ATOM	7714	CB THR E 311	75.062	41.619	35.335	1.00	71.32	C
ATOM	7715	OG1 THR E 311	75.457	42.979	35.545	1.00	71.11	O
ATOM	7716	CG2 THR E 311	75.761	41.156	34.061	1.00	71.58	C
ATOM	7717	N ALA E 312	72.529	41.428	37.424	1.00	69.88	N
ATOM	7718	CA ALA E 312	71.739	42.039	38.485	1.00	69.60	C
ATOM	7719	C ALA E 312	72.166	43.487	38.671	1.00	69.88	C
ATOM	7720	O ALA E 312	71.294	44.349	38.821	1.00	69.28	O
ATOM	7721	CB ALA E 312	71.763	41.300	39.794	1.00	69.72	C
ATOM	7722	N ASP E 313	73.466	43.750	38.648	1.00	71.06	N
ATOM	7723	CA ASP E 313	73.901	45.138	38.782	1.00	72.48	C
ATOM	7724	C ASP E 313	73.412	46.041	37.677	1.00	70.28	C
ATOM	7725	O ASP E 313	72.943	47.120	38.016	1.00	69.52	O
ATOM	7726	CB ASP E 313	75.426	45.194	38.920	1.00	76.80	C
ATOM	7727	CG ASP E 313	75.762	44.768	40.352	1.00	80.77	C
ATOM	7728	OD1 ASP E 313	75.182	45.405	41.270	1.00	82.19	O
ATOM	7729	OD2 ASP E 313	76.567	43.816	40.553	1.00	82.97	O
ATOM	7730	N GLN E 314	73.457	45.680	36.414	1.00	69.29	N
ATOM	7731	CA GLN E 314	72.996	46.542	35.335	1.00	69.21	C
ATOM	7732	C GLN E 314	71.491	46.761	35.419	1.00	67.65	C
ATOM	7733	O GLN E 314	71.014	47.872	35.215	1.00	68.31	O
ATOM	7734	CB GLN E 314	73.320	45.959	33.960	1.00	71.55	C
ATOM	7735	CG GLN E 314	74.627	45.191	33.998	1.00	74.36	C
ATOM	7736	CD GLN E 314	75.069	44.694	32.649	1.00	76.01	C
ATOM	7737	OE1 GLN E 314	74.981	43.502	32.343	1.00	77.18	O
ATOM	7738	NE2 GLN E 314	75.541	45.682	31.887	1.00	77.10	N
ATOM	7739	N MET E 315	70.760	45.697	35.720	1.00	64.89	N

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ATOM 7740 CA MET E 315	69.321 45.727 35.900 1.00 61.52	C
ATOM 7741 C MET E 315	68.984 46.796 36.941 1.00 60.15	C
ATOM 7742 O MET E 315	68.232 47.738 36.694 1.00 59.18	O
ATOM 7743 CB MET E 315	68.866 44.369 36.399 1.00 61.20	C
ATOM 7744 CG MET E 315	67.374 44.157 36.557 1.00 61.73	C
ATOM 7745 SD MET E 315	66.545 43.770 34.975 1.00 60.72	S
ATOM 7746 CE MET E 315	65.521 45.250 34.944 1.00 61.58	C
ATOM 7747 N VAL E 316	69.586 46.706 38.128 1.00 59.06	N
ATOM 7748 CA VAL E 316	69.334 47.693 39.160 1.00 58.51	C
ATOM 7749 C VAL E 316	69.568 49.109 38.668 1.00 59.26	C
ATOM 7750 O VAL E 316	68.757 49.996 38.917 1.00 60.99	O
ATOM 7751 CB VAL E 316	70.182 47.522 40.426 1.00 57.64	C
ATOM 7752 CG1 VAL E 316	69.926 48.654 41.412 1.00 56.70	C
ATOM 7753 CG2 VAL E 316	69.871 46.177 41.069 1.00 57.96	C
ATOM 7754 N SER E 317	70.665 49.373 38.003 1.00 59.51	N
ATOM 7755 CA SER E 317	70.944 50.739 37.560 1.00 60.83	C
ATOM 7756 C SER E 317	70.009 51.159 36.456 1.00 59.74	C
ATOM 7757 O SER E 317	69.545 52.304 36.418 1.00 60.86	O
ATOM 7758 CB SER E 317	72.391 50.810 37.057 1.00 62.92	C
ATOM 7759 OG SER E 317	72.768 49.429 36.981 1.00 66.28	O
ATOM 7760 N ALA E 318	69.718 50.225 35.560 1.00 57.32	N
ATOM 7761 CA ALA E 318	68.783 50.552 34.489 1.00 55.79	C
ATOM 7762 C ALA E 318	67.476 51.078 35.083 1.00 55.92	C
ATOM 7763 O ALA E 318	66.890 52.070 34.648 1.00 55.88	O
ATOM 7764 CB ALA E 318	68.486 49.293 33.718 1.00 55.78	C
ATOM 7765 N LEU E 319	66.998 50.370 36.111 1.00 55.08	N
ATOM 7766 CA LEU E 319	65.771 50.688 36.813 1.00 52.78	C
ATOM 7767 C LEU E 319	65.972 51.959 37.583 1.00 54.13	C
ATOM 7768 O LEU E 319	65.170 52.873 37.500 1.00 54.67	O
ATOM 7769 CB LEU E 319	65.441 49.546 37.767 1.00 50.55	C
ATOM 7770 CG LEU E 319	64.947 48.274 37.072 1.00 49.71	C
ATOM 7771 CD1 LEU E 319	64.666 47.218 38.123 1.00 48.77	C
ATOM 7772 CD2 LEU E 319	63.747 48.565 36.173 1.00 48.75	C
ATOM 7773 N LEU E 320	67.090 52.082 38.278 1.00 56.12	N
ATOM 7774 CA LEU E 320	67.366 53.288 39.055 1.00 58.13	C
ATOM 7775 C LEU E 320	67.378 54.490 38.144 1.00 60.62	C
ATOM 7776 O LEU E 320	67.002 55.584 38.522 1.00 62.27	O
ATOM 7777 CB LEU E 320	68.697 53.147 39.799 1.00 57.11	C
ATOM 7778 CG LEU E 320	68.449 52.587 41.195 1.00 56.24	C
ATOM 7779 CD1 LEU E 320	69.771 52.365 41.887 1.00 57.34	C
ATOM 7780 CD2 LEU E 320	67.526 53.555 41.901 1.00 55.80	C
ATOM 7781 N ASP E 321	67.814 54.306 36.919 1.00 63.78	N
ATOM 7782 CA ASP E 321	67.844 55.362 35.948 1.00 67.74	C
ATOM 7783 C ASP E 321	66.504 55.768 35.388 1.00 66.51	C
ATOM 7784 O ASP E 321	66.284 56.942 35.112 1.00 68.09	O

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ATOM 7785 CB ASP E 321	68.660 54.866 34.732 1.00 73.25	C
ATOM 7786 CG ASP E 321	70.007 55.573 34.820 1.00 78.83	C
ATOM 7787 OD1 ASP E 321	70.229 56.287 35.842 1.00 81.54	O
ATOM 7788 OD2 ASP E 321	70.810 55.390 33.871 1.00 81.74	O
ATOM 7789 N ALA E 322	65.596 54.825 35.185 1.00 63.63	N
ATOM 7790 CA ALA E 322	64.310 55.135 34.587 1.00 60.60	C
ATOM 7791 C ALA E 322	63.429 55.954 35.499 1.00 59.85	C
ATOM 7792 O ALA E 322	62.408 56.514 35.072 1.00 59.85	O
ATOM 7793 CB ALA E 322	63.663 53.798 34.246 1.00 60.27	C
ATOM 7794 N GLU E 323	63.770 56.023 36.786 1.00 58.01	N
ATOM 7795 CA GLU E 323	62.919 56.750 37.730 1.00 55.97	C
ATOM 7796 C GLU E 323	62.490 58.058 37.151 1.00 55.08	C
ATOM 7797 O GLU E 323	63.247 58.786 36.523 1.00 57.54	O
ATOM 7798 CB GLU E 323	63.694 56.817 39.039 1.00 55.76	C
ATOM 7799 CG GLU E 323	63.544 55.500 39.811 1.00 55.81	C
ATOM 7800 CD GLU E 323	62.152 55.434 40.397 1.00 56.70	C
ATOM 7801 OE1 GLU E 323	61.776 56.308 41.211 1.00 57.38	O
ATOM 7802 OE2 GLU E 323	61.381 54.527 40.053 1.00 57.03	O
ATOM 7803 N PRO E 324	61.243 58.415 37.306 1.00 54.39	N
ATOM 7804 CA PRO E 324	60.676 59.671 36.823 1.00 53.99	C
ATOM 7805 C PRO E 324	61.006 60.793 37.785 1.00 53.72	C
ATOM 7806 O PRO E 324	61.466 60.572 38.900 1.00 55.05	O
ATOM 7807 CB PRO E 324	59.153 59.457 36.810 1.00 53.22	C
ATOM 7808 CG PRO E 324	59.024 58.476 37.934 1.00 53.17	C
ATOM 7809 CD PRO E 324	60.264 57.627 38.049 1.00 53.88	C
ATOM 7810 N PRO E 325	60.760 62.008 37.397 1.00 53.96	N
ATOM 7811 CA PRO E 325	60.981 63.188 38.208 1.00 55.99	C
ATOM 7812 C PRO E 325	59.956 63.279 39.316 1.00 57.54	C
ATOM 7813 O PRO E 325	58.922 62.633 39.129 1.00 59.50	O
ATOM 7814 CB PRO E 325	60.783 64.373 37.239 1.00 55.66	C
ATOM 7815 CG PRO E 325	59.841 63.787 36.229 1.00 55.04	C
ATOM 7816 CD PRO E 325	60.207 62.331 36.081 1.00 54.93	C
ATOM 7817 N ILE E 326	60.110 64.010 40.390 1.00 59.40	N
ATOM 7818 CA ILE E 326	59.047 64.094 41.405 1.00 62.16	C
ATOM 7819 C ILE E 326	58.231 65.358 41.070 1.00 60.95	C
ATOM 7820 O ILE E 326	58.865 66.421 40.958 1.00 61.11	O
ATOM 7821 CB ILE E 326	59.425 64.267 42.892 1.00 64.57	C
ATOM 7822 CG1 ILE E 326	60.372 65.455 43.142 1.00 67.03	C
ATOM 7823 CG2 ILE E 326	60.016 62.999 43.511 1.00 64.53	C
ATOM 7824 CD1 ILE E 326	61.627 65.591 42.290 1.00 69.10	C
ATOM 7825 N LEU E 327	56.928 65.259 40.897 1.00 59.14	N
ATOM 7826 CA LEU E 327	56.176 66.473 40.595 1.00 57.57	C
ATOM 7827 C LEU E 327	55.911 67.247 41.875 1.00 58.33	C
ATOM 7828 O LEU E 327	56.166 66.834 42.999 1.00 57.32	O
ATOM 7829 CB LEU E 327	54.907 66.051 39.874 1.00 56.25	C

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ATOM	7830	CG LEU E 327	55.062	65.113	38.692	1.00	55.77	C
ATOM	7831	CD1 LEU E 327	53.826	65.144	37.802	1.00	55.31	C
ATOM	7832	CD2 LEU E 327	56.305	65.426	37.874	1.00	55.58	C
ATOM	7833	N TYR E 328	55.396	68.458	41.735	1.00	60.55	N
ATOM	7834	CA TYR E 328	55.008	69.326	42.832	1.00	62.06	C
ATOM	7835	C TYR E 328	53.498	69.533	42.642	1.00	63.12	C
ATOM	7836	O TYR E 328	53.050	69.583	41.495	1.00	62.44	O
ATOM	7837	CB TYR E 328	55.674	70.709	42.851	1.00	62.29	C
ATOM	7838	CG TYR E 328	57.079	70.585	43.383	1.00	62.82	C
ATOM	7839	CD1 TYR E 328	57.303	70.581	44.747	1.00	63.59	C
ATOM	7840	CD2 TYR E 328	58.168	70.444	42.546	1.00	63.07	C
ATOM	7841	CE1 TYR E 328	58.587	70.447	45.235	1.00	64.17	C
ATOM	7842	CE2 TYR E 328	59.455	70.304	43.031	1.00	63.49	C
ATOM	7843	CZ TYR E 328	59.657	70.302	44.386	1.00	64.13	C
ATOM	7844	OH TYR E 328	60.928	70.165	44.899	1.00	65.08	O
ATOM	7845	N SER E 329	52.766	69.635	43.728	1.00	65.10	N
ATOM	7846	CA SER E 329	51.337	69.839	43.584	1.00	67.67	C
ATOM	7847	C SER E 329	51.090	71.276	43.149	1.00	70.67	C
ATOM	7848	O SER E 329	51.825	72.164	43.562	1.00	70.24	O
ATOM	7849	CB SER E 329	50.621	69.568	44.903	1.00	66.71	C
ATOM	7850	OG SER E 329	49.353	70.169	44.764	1.00	67.28	O
ATOM	7851	N GLU E 330	50.068	71.489	42.340	1.00	75.59	N
ATOM	7852	CA GLU E 330	49.667	72.797	41.847	1.00	79.74	C
ATOM	7853	C GLU E 330	49.227	73.680	43.009	1.00	80.39	C
ATOM	7854	O GLU E 330	48.555	73.276	43.957	1.00	80.63	O
ATOM	7855	CB GLU E 330	48.524	72.672	40.843	1.00	83.66	C
ATOM	7856	CG GLU E 330	47.189	73.282	41.204	1.00	88.63	C
ATOM	7857	CD GLU E 330	46.072	72.327	41.592	1.00	91.97	C
ATOM	7858	OE1 GLU E 330	45.391	71.767	40.683	1.00	93.20	O
ATOM	7859	OE2 GLU E 330	45.821	72.110	42.814	1.00	93.64	O
ATOM	7860	N PHE E 337	40.305	73.124	51.688	1.00	85.22	N
ATOM	7861	CA PHE E 337	40.117	71.718	51.376	1.00	84.72	C
ATOM	7862	C PHE E 337	38.650	71.308	51.477	1.00	83.52	C
ATOM	7863	O PHE E 337	38.042	71.506	52.526	1.00	84.39	O
ATOM	7864	CB PHE E 337	40.874	70.727	52.265	1.00	85.39	C
ATOM	7865	CG PHE E 337	42.298	70.544	51.823	1.00	86.55	C
ATOM	7866	CD1 PHE E 337	42.658	70.658	50.496	1.00	87.08	C
ATOM	7867	CD2 PHE E 337	43.280	70.276	52.755	1.00	87.08	C
ATOM	7868	CE1 PHE E 337	43.966	70.504	50.112	1.00	87.85	C
ATOM	7869	CE2 PHE E 337	44.588	70.119	52.384	1.00	87.59	C
ATOM	7870	CZ PHE E 337	44.932	70.231	51.053	1.00	88.06	C
ATOM	7871	N SER E 338	38.134	70.743	50.400	1.00	80.45	N
ATOM	7872	CA SER E 338	36.748	70.299	50.424	1.00	77.39	C
ATOM	7873	C SER E 338	36.773	69.014	49.635	1.00	75.91	C
ATOM	7874	O SER E 338	37.700	68.892	48.837	1.00	76.77	O

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ATOM 7875 CB SER E 338	35.867 71.311 49.723 1.00 77.21	C
ATOM 7876 OG SER E 338	36.473 71.741 48.529 1.00 76.37	O
ATOM 7877 N GLUE 339	35.823 68.126 49.787 1.00 73.76	N
ATOM 7878 CA GLUE 339	35.834 66.900 48.985 1.00 71.38	C
ATOM 7879 C GLUE 339	36.255 67.295 47.579 1.00 69.78	C
ATOM 7880 O GLUE 339	37.273 66.818 47.082 1.00 70.13	O
ATOM 7881 CB GLUE 339	34.472 66.274 49.041 1.00 71.31	C
ATOM 7882 CG GLUE 339	33.992 65.361 47.946 1.00 71.58	C
ATOM 7883 CD GLUE 339	33.083 64.346 48.613 1.00 72.39	C
ATOM 7884 OE1 GLUE 339	33.538 63.814 49.636 1.00 72.34	O
ATOM 7885 OE2 GLUE 339	31.956 64.130 48.134 1.00 73.87	O
ATOM 7886 N ALA E 340	35.535 68.198 46.932 1.00 67.92	N
ATOM 7887 CA ALA E 340	35.894 68.622 45.589 1.00 65.83	C
ATOM 7888 C ALA E 340	37.283 69.200 45.466 1.00 64.07	C
ATOM 7889 O ALA E 340	37.997 68.831 44.550 1.00 64.88	O
ATOM 7890 CB ALA E 340	34.895 69.652 45.089 1.00 66.08	C
ATOM 7891 N SER E 341	37.702 70.101 46.313 1.00 62.83	N
ATOM 7892 CA SER E 341	39.009 70.702 46.191 1.00 62.49	C
ATOM 7893 C SER E 341	40.091 69.671 46.382 1.00 62.33	C
ATOM 7894 O SER E 341	41.089 69.675 45.649 1.00 62.93	O
ATOM 7895 CB SER E 341	39.118 71.897 47.120 1.00 63.53	C
ATOM 7896 OG SER E 341	40.106 71.740 48.096 1.00 65.47	O
ATOM 7897 N MET E 342	39.956 68.778 47.360 1.00 61.79	N
ATOM 7898 CA MET E 342	40.975 67.762 47.597 1.00 59.84	C
ATOM 7899 C MET E 342	41.044 66.748 46.462 1.00 59.34	C
ATOM 7900 O MET E 342	42.120 66.499 45.892 1.00 60.30	O
ATOM 7901 CB MET E 342	40.797 66.995 48.892 1.00 59.05	C
ATOM 7902 CG MET E 342	42.092 66.245 49.162 1.00 59.51	C
ATOM 7903 SD MET E 342	42.222 65.809 50.900 1.00 60.69	S
ATOM 7904 CE MET E 342	40.977 64.552 50.989 1.00 60.62	C
ATOM 7905 N MET E 343	39.900 66.176 46.078 1.00 57.03	N
ATOM 7906 CA MET E 343	39.890 65.240 44.964 1.00 55.04	C
ATOM 7907 C MET E 343	40.588 65.921 43.803 1.00 54.50	C
ATOM 7908 O MET E 343	41.427 65.300 43.168 1.00 56.27	O
ATOM 7909 CB MET E 343	38.493 64.826 44.567 1.00 54.80	C
ATOM 7910 CG MET E 343	37.964 63.788 45.547 1.00 54.67	C
ATOM 7911 SD MET E 343	38.953 62.291 45.512 1.00 52.98	S
ATOM 7912 CE MET E 343	39.223 62.021 43.793 1.00 52.06	C
ATOM 7913 N GLY E 344	40.282 67.174 43.539 1.00 52.77	N
ATOM 7914 CA GLY E 344	40.931 67.895 42.469 1.00 52.11	C
ATOM 7915 C GLY E 344	42.439 67.808 42.584 1.00 51.60	C
ATOM 7916 O GLY E 344	43.004 67.330 41.607 1.00 52.25	O
ATOM 7917 N LEU E 345	43.093 68.205 43.668 1.00 51.61	N
ATOM 7918 CA LEU E 345	44.540 68.117 43.734 1.00 52.10	C
ATOM 7919 C LEU E 345	45.125 66.730 43.455 1.00 50.99	C

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ATOM	7920	O	LEU E 345	46.007	66.515	42.626	1.00	49.85	O
ATOM	7921	CB	LEU E 345	45.081	68.394	45.131	1.00	53.85	C
ATOM	7922	CG	LEU E 345	44.953	69.833	45.603	1.00	56.56	C
ATOM	7923	CD1	LEU E 345	44.136	69.811	46.891	1.00	57.16	C
ATOM	7924	CD2	LEU E 345	46.313	70.472	45.781	1.00	56.83	C
ATOM	7925	N	LEU E 346	44.571	65.814	44.258	1.00	49.14	N
ATOM	7926	CA	LEU E 346	44.986	64.418	44.177	1.00	47.49	C
ATOM	7927	C	LEU E 346	44.896	63.900	42.760	1.00	46.79	C
ATOM	7928	O	LEU E 346	45.813	63.355	42.149	1.00	45.83	O
ATOM	7929	CB	LEU E 346	44.110	63.680	45.186	1.00	47.01	C
ATOM	7930	CG	LEU E 346	44.533	63.926	46.634	1.00	47.91	C
ATOM	7931	CD1	LEU E 346	43.936	62.861	47.554	1.00	47.78	C
ATOM	7932	CD2	LEU E 346	46.047	63.950	46.838	1.00	47.51	C
ATOM	7933	N	THR E 347	43.722	64.101	42.185	1.00	45.98	N
ATOM	7934	CA	THR E 347	43.387	63.697	40.825	1.00	45.47	C
ATOM	7935	C	THR E 347	44.236	64.394	39.803	1.00	46.07	C
ATOM	7936	O	THR E 347	44.710	63.770	38.859	1.00	46.31	O
ATOM	7937	CB	THR E 347	41.876	63.928	40.726	1.00	45.77	C
ATOM	7938	OG1	THR E 347	41.285	62.634	40.511	1.00	46.10	O
ATOM	7939	CG2	THR E 347	41.473	64.979	39.747	1.00	45.14	C
ATOM	7940	N	ASN E 348	44.512	65.679	39.952	1.00	47.18	N
ATOM	7941	CA	ASN E 348	45.376	66.434	39.055	1.00	47.33	C
ATOM	7942	C	ASN E 348	46.804	65.869	39.095	1.00	45.16	C
ATOM	7943	O	ASN E 348	47.477	65.591	38.118	1.00	44.24	O
ATOM	7944	CB	ASN E 348	45.386	67.899	39.504	1.00	50.18	C
ATOM	7945	CG	ASN E 348	46.348	68.766	38.697	1.00	54.12	C
ATOM	7946	OD1	ASN E 348	47.532	69.034	39.065	1.00	54.75	O
ATOM	7947	ND2	ASN E 348	45.771	69.187	37.550	1.00	54.87	N
ATOM	7948	N	LEU E 349	47.335	65.683	40.286	1.00	43.41	N
ATOM	7949	CA	LEU E 349	48.674	65.173	40.501	1.00	42.15	C
ATOM	7950	C	LEU E 349	48.756	63.811	39.856	1.00	42.03	C
ATOM	7951	O	LEU E 349	49.757	63.555	39.179	1.00	43.04	O
ATOM	7952	CB	LEU E 349	48.968	65.152	42.004	1.00	42.95	C
ATOM	7953	CG	LEU E 349	50.340	64.653	42.411	1.00	43.25	C
ATOM	7954	CD1	LEU E 349	51.417	65.586	41.855	1.00	43.86	C
ATOM	7955	CD2	LEU E 349	50.481	64.509	43.905	1.00	43.16	C
ATOM	7956	N	ALA E 350	47.759	62.935	40.017	1.00	40.82	N
ATOM	7957	CA	ALA E 350	47.776	61.615	39.414	1.00	39.79	C
ATOM	7958	C	ALA E 350	47.854	61.751	37.900	1.00	41.20	C
ATOM	7959	O	ALA E 350	48.729	61.187	37.235	1.00	41.18	O
ATOM	7960	CB	ALA E 350	46.545	60.810	39.745	1.00	39.02	C
ATOM	7961	N	ASP E 351	46.952	62.556	37.331	1.00	42.05	N
ATOM	7962	CA	ASP E 351	46.960	62.747	35.894	1.00	43.55	C
ATOM	7963	C	ASP E 351	48.325	63.146	35.367	1.00	44.64	C
ATOM	7964	O	ASP E 351	48.749	62.760	34.258	1.00	45.95	O

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ATOM 7965 CB ASP E 351	45.892 63.754 35.534 1.00 45.99	C
ATOM 7966 CG ASP E 351	45.849 63.920 34.033 1.00 49.35	C
ATOM 7967 OD1 ASP E 351	45.353 63.008 33.355 1.00 51.07	O
ATOM 7968 OD2 ASP E 351	46.340 64.968 33.562 1.00 51.79	O
ATOM 7969 N ARG E 352	49.084 63.941 36.102 1.00 44.28	N
ATOM 7970 CA ARG E 352	50.397 64.373 35.671 1.00 44.89	C
ATOM 7971 C ARG E 352	51.454 63.293 35.758 1.00 45.67	C
ATOM 7972 O ARG E 352	52.277 63.094 34.847 1.00 46.39	O
ATOM 7973 CB ARG E 352	50.791 65.599 36.479 1.00 45.31	C
ATOM 7974 CG ARG E 352	50.074 66.823 35.923 1.00 47.04	C
ATOM 7975 CD ARG E 352	51.018 68.022 36.145 1.00 48.79	C
ATOM 7976 NE ARG E 352	50.749 68.361 37.541 1.00 51.41	N
ATOM 7977 CZ ARG E 352	51.710 68.620 38.432 1.00 52.42	C
ATOM 7978 NH1 ARG E 352	52.973 68.607 38.039 1.00 51.54	N
ATOM 7979 NH2 ARG E 352	51.239 68.883 39.656 1.00 53.39	N
ATOM 7980 N GLU E 353	51.452 62.533 36.853 1.00 44.89	N
ATOM 7981 CA GLU E 353	52.427 61.455 36.998 1.00 42.61	C
ATOM 7982 C GLU E 353	52.225 60.407 35.922 1.00 41.58	C
ATOM 7983 O GLU E 353	53.165 59.738 35.520 1.00 41.66	O
ATOM 7984 CB GLU E 353	52.212 60.810 38.359 1.00 42.28	C
ATOM 7985 CG GLU E 353	52.159 61.796 39.504 1.00 42.55	C
ATOM 7986 CD GLU E 353	52.357 61.064 40.813 1.00 44.11	C
ATOM 7987 OE1 GLU E 353	53.418 60.438 40.997 1.00 44.30	O
ATOM 7988 OE2 GLU E 353	51.435 61.111 41.652 1.00 45.63	O
ATOM 7989 N LEU E 354	50.992 60.243 35.461 1.00 41.20	N
ATOM 7990 CA LEU E 354	50.638 59.265 34.459 1.00 41.40	C
ATOM 7991 C LEU E 354	51.483 59.446 33.222 1.00 41.40	C
ATOM 7992 O LEU E 354	51.988 58.492 32.637 1.00 41.35	O
ATOM 7993 CB LEU E 354	49.132 59.282 34.178 1.00 40.94	C
ATOM 7994 CG LEU E 354	48.423 58.370 35.199 1.00 40.08	C
ATOM 7995 CD1 LEU E 354	46.976 58.751 35.290 1.00 39.80	C
ATOM 7996 CD2 LEU E 354	48.644 56.929 34.750 1.00 40.20	C
ATOM 7997 N VAL E 355	51.649 60.702 32.847 1.00 41.94	N
ATOM 7998 CA VAL E 355	52.492 60.999 31.680 1.00 42.07	C
ATOM 7999 C VAL E 355	53.888 60.446 31.901 1.00 43.39	C
ATOM 8000 O VAL E 355	54.390 59.614 31.137 1.00 45.00	O
ATOM 8001 CB VAL E 355	52.519 62.515 31.489 1.00 39.86	C
ATOM 8002 CG1 VAL E 355	53.353 62.849 30.312 1.00 40.48	C
ATOM 8003 CG2 VAL E 355	51.096 62.910 31.194 1.00 41.98	C
ATOM 8004 N HIS E 356	54.552 60.832 32.977 1.00 43.36	N
ATOM 8005 CA HIS E 356	55.870 60.352 33.297 1.00 44.05	C
ATOM 8006 C HIS E 356	55.863 58.844 33.379 1.00 43.90	C
ATOM 8007 O HIS E 356	56.805 58.186 32.912 1.00 43.40	O
ATOM 8008 CB HIS E 356	56.329 61.010 34.606 1.00 48.13	C
ATOM 8009 CG HIS E 356	56.461 62.483 34.331 1.00 51.56	C

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ATOM	8010	ND1 HIS E 356	57.666	63.111	34.140	1.00	53.20	N
ATOM	8011	CD2 HIS E 356	55.505	63.431	34.182	1.00	53.15	C
ATOM	8012	CE1 HIS E 356	57.444	64.386	33.886	1.00	54.09	C
ATOM	8013	NE2 HIS E 356	56.142	64.614	33.906	1.00	54.08	N
ATOM	8014	N MET E 357	54.803	58.280	33.973	1.00	43.77	N
ATOM	8015	CA MET E 357	54.698	56.845	34.125	1.00	42.63	C
ATOM	8016	C MET E 357	54.900	56.088	32.823	1.00	42.16	C
ATOM	8017	O MET E 357	55.651	55.134	32.758	1.00	42.72	O
ATOM	8018	CB MET E 357	53.379	56.351	34.719	1.00	42.21	C
ATOM	8019	CG MET E 357	53.567	54.845	35.039	1.00	41.81	C
ATOM	8020	SD MET E 357	52.012	54.208	35.644	1.00	41.75	S
ATOM	8021	CE MET E 357	51.933	55.033	37.233	1.00	43.97	C
ATOM	8022	N ILE E 358	54.191	56.505	31.800	1.00	42.02	N
ATOM	8023	CA ILE E 358	54.262	55.912	30.473	1.00	41.51	C
ATOM	8024	C ILE E 358	55.700	55.930	29.986	1.00	42.64	C
ATOM	8025	O ILE E 358	56.154	54.908	29.485	1.00	42.86	O
ATOM	8026	CB ILE E 358	53.376	56.704	29.491	1.00	39.37	C
ATOM	8027	CG1 ILE E 358	51.923	56.606	29.934	1.00	38.89	C
ATOM	8028	CG2 ILE E 358	53.525	56.159	28.096	1.00	38.83	C
ATOM	8029	CD1 ILE E 358	50.944	57.324	29.059	1.00	38.55	C
ATOM	8030	N ASN E 359	56.391	57.053	30.131	1.00	44.20	N
ATOM	8031	CA ASN E 359	57.787	57.136	29.737	1.00	46.66	C
ATOM	8032	C ASN E 359	58.658	56.162	30.509	1.00	45.71	C
ATOM	8033	O ASN E 359	59.451	55.383	29.997	1.00	46.33	O
ATOM	8034	CB ASN E 359	58.293	58.549	30.031	1.00	51.90	C
ATOM	8035	CG ASN E 359	57.759	59.447	28.926	1.00	55.87	C
ATOM	8036	OD1 ASN E 359	58.138	59.117	27.792	1.00	59.61	O
ATOM	8037	ND2 ASN E 359	56.958	60.463	29.184	1.00	56.96	N
ATOM	8038	N TRP E 360	58.512	56.147	31.823	1.00	44.28	N
ATOM	8039	CA TRP E 360	59.254	55.214	32.656	1.00	42.84	C
ATOM	8040	C TRP E 360	59.039	53.781	32.220	1.00	42.98	C
ATOM	8041	O TRP E 360	59.922	52.944	32.106	1.00	43.74	O
ATOM	8042	CB TRP E 360	58.668	55.384	34.058	1.00	42.65	C
ATOM	8043	CG TRP E 360	59.076	54.246	34.936	1.00	42.93	C
ATOM	8044	CD1 TRP E 360	60.296	54.048	35.506	1.00	42.78	C
ATOM	8045	CD2 TRP E 360	58.243	53.141	35.326	1.00	42.85	C
ATOM	8046	NE1 TRP E 360	60.267	52.885	36.227	1.00	43.29	N
ATOM	8047	CE2 TRP E 360	59.028	52.309	36.144	1.00	42.52	C
ATOM	8048	CE3 TRP E 360	56.918	52.787	35.049	1.00	42.24	C
ATOM	8049	CZ2 TRP E 360	58.547	51.142	36.704	1.00	41.92	C
ATOM	8050	CZ3 TRP E 360	56.453	51.623	35.608	1.00	43.00	C
ATOM	8051	CH2 TRP E 360	57.261	50.814	36.418	1.00	42.73	C
ATOM	8052	N ALA E 361	57.799	53.369	31.978	1.00	44.16	N
ATOM	8053	CA ALA E 361	57.451	52.023	31.565	1.00	44.49	C
ATOM	8054	C ALA E 361	58.326	51.629	30.391	1.00	45.81	C

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ATOM 8055 O ALA E 361	58.818 50.512 30.452 1.00 45.32	O
ATOM 8056 CB ALA E 361	55.998 51.877 31.146 1.00 43.81	C
ATOM 8057 N LYS E 362	58.497 52.519 29.414 1.00 48.10	N
ATOM 8058 CA LYS E 362	59.294 52.228 28.240 1.00 51.06	C
ATOM 8059 C LYS E 362	60.729 51.827 28.505 1.00 51.92	C
ATOM 8060 O LYS E 362	61.285 51.122 27.659 1.00 52.51	O
ATOM 8061 CB LYS E 362	59.220 53.381 27.248 1.00 52.88	C
ATOM 8062 CG LYS E 362	57.815 53.499 26.670 1.00 56.32	C
ATOM 8063 CD LYS E 362	57.545 52.350 25.706 1.00 59.44	C
ATOM 8064 CE LYS E 362	56.994 52.840 24.368 1.00 62.09	C
ATOM 8065 NZ LYS E 362	56.986 51.784 23.287 1.00 63.02	N
ATOM 8066 N ARG E 363	61.327 52.195 29.615 1.00 52.40	N
ATOM 8067 CA ARG E 363	62.665 51.847 30.003 1.00 53.85	C
ATOM 8068 C ARG E 363	62.748 50.655 30.942 1.00 53.01	C
ATOM 8069 O ARG E 363	63.861 50.333 31.387 1.00 54.48	O
ATOM 8070 CB ARG E 363	63.293 53.019 30.780 1.00 56.91	C
ATOM 8071 CG ARG E 363	62.449 54.263 30.564 1.00 62.85	C
ATOM 8072 CD ARG E 363	62.981 54.929 29.283 1.00 68.62	C
ATOM 8073 NE ARG E 363	64.337 55.368 29.657 1.00 74.45	N
ATOM 8074 CZ ARG E 363	64.512 56.355 30.546 1.00 77.99	C
ATOM 8075 NH1 ARG E 363	63.433 56.948 31.074 1.00 79.59	N
ATOM 8076 NH2 ARG E 363	65.754 56.721 30.882 1.00 79.71	N
ATOM 8077 N VAL E 364	61.687 49.981 31.340 1.00 51.00	N
ATOM 8078 CA VAL E 364	61.879 48.840 32.271 1.00 48.62	C
ATOM 8079 C VAL E 364	62.332 47.706 31.392 1.00 47.70	C
ATOM 8080 O VAL E 364	61.613 47.311 30.477 1.00 48.86	O
ATOM 8081 CB VAL E 364	60.540 48.512 32.969 1.00 47.56	C
ATOM 8082 CG1 VAL E 364	60.553 47.172 33.659 1.00 45.31	C
ATOM 8083 CG2 VAL E 364	60.173 49.655 33.902 1.00 47.17	C
ATOM 8084 N PRO E 365	63.501 47.189 31.585 1.00 47.26	N
ATOM 8085 CA PRO E 365	64.060 46.117 30.774 1.00 47.42	C
ATOM 8086 C PRO E 365	63.036 45.052 30.471 1.00 48.06	C
ATOM 8087 O PRO E 365	62.452 44.562 31.429 1.00 48.89	O
ATOM 8088 CB PRO E 365	65.247 45.558 31.568 1.00 47.14	C
ATOM 8089 CG PRO E 365	65.708 46.873 32.187 1.00 48.39	C
ATOM 8090 CD PRO E 365	64.443 47.641 32.608 1.00 48.24	C
ATOM 8091 N GLY E 366	62.811 44.736 29.191 1.00 48.05	N
ATOM 8092 CA GLY E 366	61.888 43.705 28.785 1.00 46.86	C
ATOM 8093 C GLY E 366	60.530 44.191 28.352 1.00 47.67	C
ATOM 8094 O GLY E 366	59.827 43.546 27.556 1.00 48.69	O
ATOM 8095 N PHE E 367	60.102 45.339 28.867 1.00 47.11	N
ATOM 8096 CA PHE E 367	58.791 45.899 28.567 1.00 46.48	C
ATOM 8097 C PHE E 367	58.503 46.101 27.083 1.00 46.37	C
ATOM 8098 O PHE E 367	57.541 45.719 26.424 1.00 45.46	O
ATOM 8099 CB PHE E 367	58.659 47.258 29.288 1.00 45.29	C

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ATOM	8100	CG PHE E 367	57.254	47.785	29.213	1.00	45.53	C
ATOM	8101	CD1 PHE E 367	56.239	47.199	29.946	1.00	45.04	C
ATOM	8102	CD2 PHE E 367	56.941	48.862	28.393	1.00	46.15	C
ATOM	8103	CE1 PHE E 367	54.949	47.675	29.873	1.00	45.31	C
ATOM	8104	CE2 PHE E 367	55.650	49.347	28.314	1.00	46.17	C
ATOM	8105	CZ PHE E 367	54.648	48.755	29.064	1.00	45.75	C
ATOM	8106	N VAL E 368	59.433	46.793	26.454	1.00	46.85	N
ATOM	8107	CA VAL E 368	59.418	47.174	25.063	1.00	47.56	C
ATOM	8108	C VAL E 368	59.401	45.970	24.147	1.00	49.50	C
ATOM	8109	O VAL E 368	58.958	46.117	22.986	1.00	51.13	O
ATOM	8110	CB VAL E 368	60.621	48.100	24.855	1.00	46.24	C
ATOM	8111	CG1 VAL E 368	61.431	47.684	23.666	1.00	46.91	C
ATOM	8112	CG2 VAL E 368	60.060	49.501	24.798	1.00	46.71	C
ATOM	8113	N ASP E 369	59.830	44.797	24.609	1.00	49.22	N
ATOM	8114	CA ASP E 369	59.748	43.611	23.791	1.00	49.90	C
ATOM	8115	C ASP E 369	58.316	43.106	23.703	1.00	48.10	C
ATOM	8116	O ASP E 369	58.117	42.095	23.048	1.00	49.61	O
ATOM	8117	CB ASP E 369	60.551	42.440	24.356	1.00	53.57	C
ATOM	8118	CG ASP E 369	62.001	42.767	24.627	1.00	57.64	C
ATOM	8119	OD1 ASP E 369	62.632	43.529	23.837	1.00	59.82	O
ATOM	8120	OD2 ASP E 369	62.486	42.232	25.664	1.00	58.81	O
ATOM	8121	N LEU E 370	57.282	43.617	24.298	1.00	46.26	N
ATOM	8122	CA LEU E 370	55.933	43.092	24.191	1.00	44.20	C
ATOM	8123	C LEU E 370	55.220	43.818	23.072	1.00	43.64	C
ATOM	8124	O LEU E 370	55.703	44.893	22.709	1.00	44.32	O
ATOM	8125	CB LEU E 370	55.220	43.372	25.525	1.00	44.62	C
ATOM	8126	CG LEU E 370	55.824	42.653	26.729	1.00	43.72	C
ATOM	8127	CD1 LEU E 370	55.091	42.990	28.001	1.00	43.76	C
ATOM	8128	CD2 LEU E 370	55.711	41.158	26.484	1.00	44.23	C
ATOM	8129	N THR E 371	54.118	43.310	22.554	1.00	42.71	N
ATOM	8130	CA THR E 371	53.471	44.056	21.474	1.00	42.93	C
ATOM	8131	C THR E 371	52.959	45.372	21.994	1.00	43.15	C
ATOM	8132	O THR E 371	52.609	45.480	23.152	1.00	42.85	O
ATOM	8133	CB THR E 371	52.262	43.256	20.975	1.00	43.47	C
ATOM	8134	OG1 THR E 371	51.545	42.926	22.173	1.00	44.71	O
ATOM	8135	CG2 THR E 371	52.704	41.986	20.277	1.00	43.38	C
ATOM	8136	N LEU E 372	52.865	46.372	21.118	1.00	45.22	N
ATOM	8137	CA LEU E 372	52.359	47.690	21.532	1.00	44.77	C
ATOM	8138	C LEU E 372	51.069	47.563	22.338	1.00	45.09	C
ATOM	8139	O LEU E 372	50.957	48.200	23.398	1.00	44.44	O
ATOM	8140	CB LEU E 372	52.234	48.576	20.295	1.00	42.49	C
ATOM	8141	CG LEU E 372	53.548	48.903	19.617	1.00	41.22	C
ATOM	8142	CD1 LEU E 372	53.264	49.684	18.350	1.00	43.25	C
ATOM	8143	CD2 LEU E 372	54.427	49.746	20.512	1.00	41.76	C
ATOM	8144	N HIS E 373	50.106	46.745	21.912	1.00	45.43	N

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ATOM	8145	CA	HIS E 373	48.884	46.647	22.706	1.00	47.32	C
ATOM	8146	C	HIS E 373	49.173	46.044	24.067	1.00	47.30	C
ATOM	8147	O	HIS E 373	48.655	46.557	25.084	1.00	46.34	O
ATOM	8148	CB	HIS E 373	47.801	45.952	21.902	1.00	49.96	C
ATOM	8149	CG	HIS E 373	47.251	46.889	20.863	1.00	53.52	C
ATOM	8150	ND1	HIS E 373	47.573	46.867	19.519	1.00	54.14	N
ATOM	8151	CD2	HIS E 373	46.370	47.908	21.001	1.00	54.57	C
ATOM	8152	CE1	HIS E 373	46.907	47.824	18.904	1.00	54.87	C
ATOM	8153	NE2	HIS E 373	46.166	48.494	19.778	1.00	55.54	N
ATOM	8154	N	ASP E 374	50.019	45.003	24.138	1.00	46.26	N
ATOM	8155	CA	ASP E 374	50.307	44.485	25.479	1.00	46.26	C
ATOM	8156	C	ASP E 374	50.909	45.514	26.420	1.00	45.67	C
ATOM	8157	O	ASP E 374	50.611	45.500	27.626	1.00	45.81	O
ATOM	8158	CB	ASP E 374	51.139	43.207	25.389	1.00	47.09	C
ATOM	8159	CG	ASP E 374	50.122	42.191	24.898	1.00	49.52	C
ATOM	8160	OD1	ASP E 374	48.918	42.529	24.963	1.00	49.64	O
ATOM	8161	OD2	ASP E 374	50.503	41.088	24.455	1.00	53.31	O
ATOM	8162	N	GLN E 375	51.740	46.411	25.899	1.00	44.54	N
ATOM	8163	CA	GLN E 375	52.289	47.443	26.773	1.00	44.93	C
ATOM	8164	C	GLN E 375	51.124	48.252	27.326	1.00	45.36	C
ATOM	8165	O	GLN E 375	50.974	48.358	28.552	1.00	46.12	O
ATOM	8166	CB	GLN E 375	53.267	48.293	25.992	1.00	44.78	C
ATOM	8167	CG	GLN E 375	54.412	47.413	25.523	1.00	46.26	C
ATOM	8168	CD	GLN E 375	55.356	48.147	24.606	1.00	46.81	C
ATOM	8169	OE1	GLN E 375	55.540	49.358	24.681	1.00	47.74	O
ATOM	8170	NE2	GLN E 375	55.949	47.353	23.742	1.00	47.03	N
ATOM	8171	N	VAL E 376	50.261	48.767	26.442	1.00	44.88	N
ATOM	8172	CA	VAL E 376	49.094	49.513	26.906	1.00	43.54	C
ATOM	8173	C	VAL E 376	48.332	48.676	27.929	1.00	43.22	C
ATOM	8174	O	VAL E 376	47.948	49.192	28.975	1.00	43.63	O
ATOM	8175	CB	VAL E 376	48.174	49.957	25.768	1.00	43.24	C
ATOM	8176	CG1	VAL E 376	47.227	51.017	26.293	1.00	44.01	C
ATOM	8177	CG2	VAL E 376	48.960	50.549	24.615	1.00	41.99	C
ATOM	8178	N	HIS E 377	48.120	47.391	27.711	1.00	43.66	N
ATOM	8179	CA	HIS E 377	47.416	46.562	28.698	1.00	44.10	C
ATOM	8180	C	HIS E 377	48.161	46.583	30.004	1.00	43.06	C
ATOM	8181	O	HIS E 377	47.596	47.052	30.994	1.00	43.74	O
ATOM	8182	CB	HIS E 377	47.186	45.144	28.150	1.00	45.65	C
ATOM	8183	CG	AHIS E 377	46.526	44.179	29.078	0.50	44.17	C
ATOM	8184	CG	BHIS E 377	46.100	45.198	27.098	0.50	48.43	C
ATOM	8185	ND1	AHIS E 377	45.200	44.280	29.448	0.50	43.92	N
ATOM	8186	ND1	BHIS E 377	46.290	44.797	25.788	0.50	48.69	N
ATOM	8187	CD2	AHIS E 377	47.005	43.091	29.723	0.50	44.07	C
ATOM	8188	CD2	BHIS E 377	44.810	45.630	27.175	0.50	49.00	C
ATOM	8189	CE1	AHIS E 377	44.898	43.302	30.282	0.50	43.39	C

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ATOM	8190	CE1BHIS E 377	45.168	44.967	25.111	0.50	48.62	C
ATOM	8191	NE2AHIS E 377	45.975	42.565	30.472	0.50	43.45	N
ATOM	8192	NE2BHIS E 377	44.251	45.467	25.920	0.50	48.62	N
ATOM	8193	N LEU E 378	49.409	46.180	30.164	1.00	42.65	N
ATOM	8194	CA LEU E 378	50.043	46.256	31.495	1.00	41.31	C
ATOM	8195	C LEU E 378	49.898	47.645	32.089	1.00	40.27	C
ATOM	8196	O LEU E 378	49.645	47.844	33.299	1.00	40.15	O
ATOM	8197	CB LEU E 378	51.490	45.775	31.447	1.00	41.95	C
ATOM	8198	CG LEU E 378	51.728	44.416	30.746	1.00	41.58	C
ATOM	8199	CD1 LEU E 378	53.198	44.053	30.682	1.00	40.05	C
ATOM	8200	CD2 LEU E 378	50.919	43.357	31.476	1.00	40.58	C
ATOM	8201	N LEU E 379	50.029	48.689	31.269	1.00	39.58	N
ATOM	8202	CA LEU E 379	49.870	50.039	31.805	1.00	38.63	C
ATOM	8203	C LEU E 379	48.493	50.225	32.391	1.00	38.62	C
ATOM	8204	O LEU E 379	48.327	50.518	33.562	1.00	38.70	O
ATOM	8205	CB LEU E 379	50.171	51.074	30.739	1.00	38.07	C
ATOM	8206	CG LEU E 379	51.652	51.469	30.842	1.00	40.00	C
ATOM	8207	CD1 LEU E 379	51.962	52.356	29.641	1.00	40.25	C
ATOM	8208	CD2 LEU E 379	51.986	52.097	32.204	1.00	38.60	C
ATOM	8209	N GLU E 380	47.461	50.018	31.587	1.00	39.21	N
ATOM	8210	CA GLU E 380	46.098	50.186	32.067	1.00	39.92	C
ATOM	8211	C GLU E 380	45.894	49.319	33.290	1.00	41.42	C
ATOM	8212	O GLU E 380	45.270	49.735	34.250	1.00	41.93	O
ATOM	8213	CB GLU E 380	45.091	49.830	31.001	1.00	39.38	C
ATOM	8214	CG GLU E 380	45.192	50.716	29.771	1.00	42.02	C
ATOM	8215	CD GLU E 380	44.299	50.072	28.722	1.00	45.23	C
ATOM	8216	OE1 GLU E 380	44.177	48.804	28.755	1.00	47.65	O
ATOM	8217	OE2 GLU E 380	43.744	50.844	27.914	1.00	45.70	O
ATOM	8218	N CYSE 381	46.385	48.093	33.291	1.00	43.43	N
ATOM	8219	CA CYSE 381	46.186	47.254	34.437	1.00	46.38	C
ATOM	8220	C CYSE 381	46.864	47.739	35.699	1.00	43.75	C
ATOM	8221	O CYSE 381	46.181	47.754	36.724	1.00	42.02	O
ATOM	8222	CB CYSE 381	46.531	45.801	34.050	1.00	51.44	C
ATOM	8223	SG CYSE 381	44.946	44.872	34.092	1.00	65.00	S
ATOM	8224	N ALA E 382	48.133	48.134	35.706	1.00	40.98	N
ATOM	8225	CA ALA E 382	48.785	48.539	36.935	1.00	39.19	C
ATOM	8226	C ALA E 382	48.931	49.985	37.328	1.00	38.79	C
ATOM	8227	O ALA E 382	49.459	50.309	38.395	1.00	38.18	O
ATOM	8228	CB ALA E 382	50.208	47.991	36.705	1.00	38.63	C
ATOM	8229	N TRP E 383	48.452	50.951	36.576	1.00	38.83	N
ATOM	8230	CA TRP E 383	48.648	52.367	36.825	1.00	37.86	C
ATOM	8231	C TRP E 383	48.495	52.780	38.271	1.00	37.60	C
ATOM	8232	O TRP E 383	49.426	53.284	38.909	1.00	36.02	O
ATOM	8233	CB TRP E 383	47.817	53.168	35.845	1.00	37.68	C
ATOM	8234	CG TRP E 383	46.364	53.265	36.106	1.00	37.37	C

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ATOM	8235	CD1 TRP E 383	45.367	52.465	35.652	1.00	37.08	C
ATOM	8236	CD2 TRP E 383	45.753	54.280	36.919	1.00	38.22	C
ATOM	8237	NE1 TRP E 383	44.154	52.898	36.133	1.00	37.35	N
ATOM	8238	CE2 TRP E 383	44.361	54.007	36.924	1.00	38.41	C
ATOM	8239	CE3 TRP E 383	46.244	55.367	37.659	1.00	37.25	C
ATOM	8240	CZ2 TRP E 383	43.472	54.816	37.635	1.00	37.58	C
ATOM	8241	CZ3 TRP E 383	45.347	56.146	38.354	1.00	36.24	C
ATOM	8242	CH2 TRP E 383	43.979	55.875	38.321	1.00	36.44	C
ATOM	8243	N LEU E 384	47.314	52.548	38.843	1.00	37.45	N
ATOM	8244	CA LEU E 384	47.090	52.912	40.242	1.00	35.59	C
ATOM	8245	C LEU E 384	47.983	52.128	41.184	1.00	35.15	C
ATOM	8246	O LEU E 384	48.381	52.659	42.213	1.00	33.91	O
ATOM	8247	CB LEU E 384	45.600	52.817	40.542	1.00	34.80	C
ATOM	8248	CG LEU E 384	45.114	53.321	41.892	1.00	35.29	C
ATOM	8249	CD1 LEU E 384	45.618	54.739	42.208	1.00	35.78	C
ATOM	8250	CD2 LEU E 384	43.596	53.340	41.977	1.00	33.47	C
ATOM	8251	N GLU E 385	48.354	50.871	40.891	1.00	36.22	N
ATOM	8252	CA GLU E 385	49.202	50.124	41.837	1.00	35.99	C
ATOM	8253	C GLU E 385	50.530	50.872	41.839	1.00	35.17	C
ATOM	8254	O GLU E 385	51.029	51.208	42.902	1.00	34.47	O
ATOM	8255	CB GLU E 385	49.349	48.648	41.567	1.00	36.38	C
ATOM	8256	CG GLU E 385	48.330	47.663	42.046	1.00	37.25	C
ATOM	8257	CD GLU E 385	48.535	46.270	41.481	1.00	39.83	C
ATOM	8258	OE1 GLU E 385	48.115	46.085	40.310	1.00	39.19	O
ATOM	8259	OE2 GLU E 385	49.090	45.352	42.167	1.00	42.19	O
ATOM	8260	N ILE E 386	51.042	51.136	40.638	1.00	35.91	N
ATOM	8261	CA ILE E 386	52.295	51.859	40.493	1.00	36.84	C
ATOM	8262	C ILE E 386	52.198	53.189	41.248	1.00	37.39	C
ATOM	8263	O ILE E 386	53.101	53.418	42.031	1.00	37.87	O
ATOM	8264	CB ILE E 386	52.733	52.263	39.081	1.00	37.29	C
ATOM	8265	CG1 ILE E 386	52.655	51.193	38.000	1.00	39.11	C
ATOM	8266	CG2 ILE E 386	54.153	52.766	39.108	1.00	36.98	C
ATOM	8267	CD1 ILE E 386	53.450	49.952	38.250	1.00	40.93	C
ATOM	8268	N LEU E 387	51.181	54.024	41.039	1.00	37.44	N
ATOM	8269	CA LEU E 387	51.079	55.276	41.749	1.00	36.84	C
ATOM	8270	C LEU E 387	51.104	55.057	43.250	1.00	37.11	C
ATOM	8271	O LEU E 387	51.809	55.773	43.946	1.00	37.83	O
ATOM	8272	CB LEU E 387	49.787	56.045	41.473	1.00	37.36	C
ATOM	8273	CG LEU E 387	49.672	56.828	40.166	1.00	38.07	C
ATOM	8274	CD1 LEU E 387	48.281	57.449	40.044	1.00	37.57	C
ATOM	8275	CD2 LEU E 387	50.758	57.878	40.028	1.00	37.61	C
ATOM	8276	N MET E 388	50.345	54.083	43.735	1.00	37.87	N
ATOM	8277	CA MET E 388	50.270	53.824	45.165	1.00	37.01	C
ATOM	8278	C MET E 388	51.599	53.354	45.697	1.00	37.19	C
ATOM	8279	O MET E 388	51.935	53.886	46.766	1.00	38.13	O

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ATOM	8280	CB	MET E 388	49.170	52.880	45.613	1.00	36.22	C
ATOM	8281	CG	MET E 388	47.791	53.146	45.057	1.00	37.20	C
ATOM	8282	SD	MET E 388	46.461	52.382	45.966	1.00	39.84	S
ATOM	8283	CE	MET E 388	44.984	53.248	45.589	1.00	38.34	C
ATOM	8284	N	ILE E 389	52.352	52.470	45.040	1.00	37.68	N
ATOM	8285	CA	ILE E 389	53.616	52.093	45.726	1.00	39.29	C
ATOM	8286	C	ILE E 389	54.578	53.267	45.831	1.00	40.45	C
ATOM	8287	O	ILE E 389	55.356	53.490	46.761	1.00	40.75	O
ATOM	8288	CB	ILE E 389	54.222	50.827	45.123	1.00	37.83	C
ATOM	8289	CG1	ILE E 389	55.425	50.346	45.924	1.00	36.80	C
ATOM	8290	CG2	ILE E 389	54.595	51.106	43.692	1.00	37.39	C
ATOM	8291	CD1	ILE E 389	55.773	48.905	45.705	1.00	35.84	C
ATOM	8292	N	GLY E 390	54.524	54.172	44.875	1.00	41.61	N
ATOM	8293	CA	GLY E 390	55.351	55.364	44.814	1.00	41.77	C
ATOM	8294	C	GLY E 390	55.025	56.190	46.034	1.00	41.56	C
ATOM	8295	O	GLY E 390	55.923	56.518	46.787	1.00	42.11	O
ATOM	8296	N	LEU E 391	53.738	56.469	46.198	1.00	41.60	N
ATOM	8297	CA	LEU E 391	53.307	57.279	47.342	1.00	41.33	C
ATOM	8298	C	LEU E 391	53.820	56.698	48.639	1.00	41.79	C
ATOM	8299	O	LEU E 391	54.482	57.320	49.453	1.00	41.82	O
ATOM	8300	CB	LEU E 391	51.786	57.333	47.403	1.00	41.22	C
ATOM	8301	CG	LEU E 391	51.154	57.962	48.635	1.00	41.26	C
ATOM	8302	CD1	LEU E 391	51.615	59.406	48.746	1.00	41.59	C
ATOM	8303	CD2	LEU E 391	49.649	57.899	48.614	1.00	41.44	C
ATOM	8304	N	VAL E 392	53.493	55.428	48.846	1.00	42.92	N
ATOM	8305	CA	VAL E 392	53.904	54.714	50.049	1.00	43.47	C
ATOM	8306	C	VAL E 392	55.391	54.884	50.312	1.00	43.90	C
ATOM	8307	O	VAL E 392	55.872	55.202	51.385	1.00	43.97	O
ATOM	8308	CB	VAL E 392	53.514	53.225	49.916	1.00	42.03	C
ATOM	8309	CG1	VAL E 392	54.100	52.390	51.034	1.00	42.06	C
ATOM	8310	CG2	VAL E 392	52.006	53.137	50.059	1.00	42.59	C
ATOM	8311	N	TRP E 393	56.176	54.635	49.285	1.00	45.06	N
ATOM	8312	CA	TRP E 393	57.617	54.695	49.353	1.00	46.99	C
ATOM	8313	C	TRP E 393	58.092	56.087	49.703	1.00	48.48	C
ATOM	8314	O	TRP E 393	58.947	56.258	50.563	1.00	50.59	O
ATOM	8315	CB	TRP E 393	58.184	54.330	47.988	1.00	47.26	C
ATOM	8316	CG	TRP E 393	59.584	54.800	47.814	1.00	47.60	C
ATOM	8317	CD1	TRP E 393	60.002	55.829	47.036	1.00	48.13	C
ATOM	8318	CD2	TRP E 393	60.749	54.273	48.451	1.00	48.09	C
ATOM	8319	NE1	TRP E 393	61.371	55.962	47.135	1.00	48.58	N
ATOM	8320	CE2	TRP E 393	61.854	55.011	47.991	1.00	47.67	C
ATOM	8321	CE3	TRP E 393	60.969	53.232	49.357	1.00	48.54	C
ATOM	8322	CZ2	TRP E 393	63.149	54.751	48.388	1.00	46.84	C
ATOM	8323	CZ3	TRP E 393	62.258	52.969	49.763	1.00	48.22	C
ATOM	8324	CH2	TRP E 393	63.315	53.732	49.268	1.00	47.93	C

ATOM 8325 N ARG E 394	57.559 57.110 49.025 1.00 48.72	N
ATOM 8326 CA ARG E 394	58.014 58.447 49.371 1.00 48.34	C
ATOM 8327 C ARG E 394	57.418 58.863 50.701 1.00 50.23	C
ATOM 8328 O ARG E 394	57.852 59.855 51.302 1.00 52.74	O
ATOM 8329 CB ARG E 394	57.801 59.461 48.279 1.00 46.46	C
ATOM 8330 CG ARG E 394	56.521 59.573 47.559 1.00 45.15	C
ATOM 8331 CD ARG E 394	56.556 60.746 46.577 1.00 44.54	C
ATOM 8332 NE ARG E 394	55.166 60.978 46.149 1.00 44.99	N
ATOM 8333 CZ ARG E 394	54.522 60.270 45.212 1.00 44.12	C
ATOM 8334 NH1 ARG E 394	55.172 59.289 44.607 1.00 43.02	N
ATOM 8335 NH2 ARG E 394	53.261 60.561 44.916 1.00 43.43	N
ATOM 8336 N SER E 395	56.422 58.184 51.243 1.00 51.33	N
ATOM 8337 CA SER E 395	55.819 58.574 52.499 1.00 51.59	C
ATOM 8338 C SER E 395	56.464 57.882 53.668 1.00 53.46	C
ATOM 8339 O SER E 395	56.065 58.167 54.787 1.00 54.18	O
ATOM 8340 CB SER E 395	54.345 58.158 52.460 1.00 50.67	C
ATOM 8341 OG SER E 395	53.640 59.131 51.745 1.00 50.23	O
ATOM 8342 N MET E 396	57.401 56.985 53.441 1.00 55.99	N
ATOM 8343 CA MET E 396	58.047 56.239 54.498 1.00 58.76	C
ATOM 8344 C MET E 396	58.530 56.975 55.737 1.00 61.47	C
ATOM 8345 O MET E 396	58.174 56.647 56.868 1.00 60.69	O
ATOM 8346 CB MET E 396	59.286 55.596 53.884 1.00 58.27	C
ATOM 8347 CG MET E 396	59.333 54.121 54.221 1.00 59.24	C
ATOM 8348 SD MET E 396	60.325 53.335 52.944 1.00 60.35	S
ATOM 8349 CE MET E 396	61.684 52.736 53.940 1.00 61.55	C
ATOM 8350 N GLU E 397	59.359 57.994 55.533 1.00 64.69	N
ATOM 8351 CA GLU E 397	59.911 58.750 56.625 1.00 68.40	C
ATOM 8352 C GLU E 397	59.002 59.831 57.136 1.00 66.88	C
ATOM 8353 O GLU E 397	59.498 60.873 57.593 1.00 67.26	O
ATOM 8354 CB GLU E 397	61.250 59.422 56.315 1.00 74.16	C
ATOM 8355 CG GLU E 397	62.267 58.520 55.627 1.00 80.71	C
ATOM 8356 CD GLU E 397	61.860 58.423 54.160 1.00 85.20	C
ATOM 8357 OE1 GLU E 397	61.058 59.295 53.721 1.00 86.50	O
ATOM 8358 OE2 GLU E 397	62.323 57.467 53.487 1.00 88.72	O
ATOM 8359 N HIS E 398	57.689 59.741 57.047 1.00 64.70	N
ATOM 8360 CA HIS E 398	56.795 60.759 57.571 1.00 63.74	C
ATOM 8361 C HIS E 398	55.666 59.971 58.220 1.00 62.26	C
ATOM 8362 O HIS E 398	54.553 59.929 57.724 1.00 63.40	O
ATOM 8363 CB HIS E 398	56.260 61.733 56.546 1.00 65.07	C
ATOM 8364 CG HIS E 398	57.284 62.557 55.848 1.00 66.84	C
ATOM 8365 ND1 HIS E 398	58.371 61.959 55.240 1.00 67.64	N
ATOM 8366 CD2 HIS E 398	57.452 63.869 55.619 1.00 67.86	C
ATOM 8367 CE1 HIS E 398	59.177 62.819 54.671 1.00 67.93	C
ATOM 8368 NE2 HIS E 398	58.623 63.996 54.887 1.00 68.84	N
ATOM 8369 N PRO E 399	55.976 59.322 59.319 1.00 60.73	N

ATOM	8370	CA PRO E 399	55.066	58.470	60.063	1.00	59.77	C
ATOM	8371	C PRO E 399	53.727	59.137	60.206	1.00	59.72	C
ATOM	8372	O PRO E 399	53.718	60.334	60.511	1.00	61.69	O
ATOM	8373	CB PRO E 399	55.670	58.190	61.434	1.00	59.11	C
ATOM	8374	CG PRO E 399	57.129	58.303	61.067	1.00	60.30	C
ATOM	8375	CD PRO E 399	57.282	59.321	59.970	1.00	60.39	C
ATOM	8376	N GLY E 400	52.654	58.415	59.938	1.00	58.10	N
ATOM	8377	CA GLY E 400	51.336	58.975	60.060	1.00	57.32	C
ATOM	8378	C GLY E 400	50.904	59.953	58.992	1.00	56.62	C
ATOM	8379	O GLY E 400	49.770	60.482	59.101	1.00	56.96	O
ATOM	8380	N LYS E 401	51.756	60.183	57.998	1.00	55.42	N
ATOM	8381	CA LYS E 401	51.434	61.124	56.945	1.00	55.23	C
ATOM	8382	C LYS E 401	51.702	60.543	55.562	1.00	53.19	C
ATOM	8383	O LYS E 401	52.434	59.573	55.392	1.00	52.17	O
ATOM	8384	CB LYS E 401	52.276	62.386	57.003	1.00	57.61	C
ATOM	8385	CG LYS E 401	52.491	63.103	58.301	1.00	61.00	C
ATOM	8386	CD LYS E 401	51.756	64.440	58.288	1.00	64.58	C
ATOM	8387	CE LYS E 401	51.602	64.990	59.697	1.00	67.56	C
ATOM	8388	NZ LYS E 401	52.897	64.816	60.464	1.00	70.49	N
ATOM	8389	N LEU E 402	51.068	61.206	54.595	1.00	50.89	N
ATOM	8390	CA LEU E 402	51.274	60.770	53.225	1.00	49.55	C
ATOM	8391	C LEU E 402	51.779	61.974	52.430	1.00	48.59	C
ATOM	8392	O LEU E 402	51.111	62.981	52.332	1.00	48.86	O
ATOM	8393	CB LEU E 402	50.057	60.175	52.544	1.00	49.14	C
ATOM	8394	CG LEU E 402	49.384	58.965	53.169	1.00	48.84	C
ATOM	8395	CD1 LEU E 402	47.971	58.814	52.632	1.00	49.85	C
ATOM	8396	CD2 LEU E 402	50.182	57.709	52.915	1.00	47.89	C
ATOM	8397	N LEU E 403	52.953	61.843	51.864	1.00	47.46	N
ATOM	8398	CA LEU E 403	53.595	62.830	51.067	1.00	47.16	C
ATOM	8399	C LEU E 403	53.181	62.724	49.613	1.00	47.90	C
ATOM	8400	O LEU E 403	53.958	62.207	48.786	1.00	48.76	O
ATOM	8401	CB LEU E 403	55.111	62.577	51.155	1.00	48.56	C
ATOM	8402	CG LEU E 403	55.917	63.819	50.736	1.00	49.69	C
ATOM	8403	CD1 LEU E 403	55.999	64.751	51.927	1.00	50.35	C
ATOM	8404	CD2 LEU E 403	57.270	63.447	50.178	1.00	49.66	C
ATOM	8405	N PHE E 404	52.003	63.228	49.226	1.00	47.13	N
ATOM	8406	CA PHE E 404	51.684	63.144	47.803	1.00	47.34	C
ATOM	8407	C PHE E 404	52.778	63.837	47.008	1.00	48.39	C
ATOM	8408	O PHE E 404	53.199	63.306	45.990	1.00	49.44	O
ATOM	8409	CB PHE E 404	50.316	63.721	47.465	1.00	46.41	C
ATOM	8410	CG PHE E 404	49.276	62.739	47.924	1.00	45.05	C
ATOM	8411	CD1 PHE E 404	48.843	62.814	49.221	1.00	45.82	C
ATOM	8412	CD2 PHE E 404	48.777	61.777	47.084	1.00	44.28	C
ATOM	8413	CE1 PHE E 404	47.889	61.924	49.695	1.00	46.11	C
ATOM	8414	CE2 PHE E 404	47.838	60.888	47.541	1.00	44.40	C

ATOM	8415	CZ	PHE E 404	47.400	60.966	48.842	1.00	45.60	C
ATOM	8416	N	ALA E 405	53.213	64.996	47.448	1.00	49.95	N
ATOM	8417	CA	ALA E 405	54.261	65.757	46.787	1.00	52.59	C
ATOM	8418	C	ALA E 405	55.197	66.307	47.835	1.00	53.64	C
ATOM	8419	O	ALA E 405	54.871	66.317	49.018	1.00	55.50	O
ATOM	8420	CB	ALA E 405	53.650	66.938	46.034	1.00	53.32	C
ATOM	8421	N	PRO E 406	56.315	66.857	47.408	1.00	54.23	N
ATOM	8422	CA	PRO E 406	57.308	67.482	48.284	1.00	54.34	C
ATOM	8423	C	PRO E 406	56.574	68.626	48.967	1.00	54.49	C
ATOM	8424	O	PRO E 406	56.811	68.813	50.148	1.00	56.57	O
ATOM	8425	CB	PRO E 406	58.508	67.936	47.470	1.00	53.22	C
ATOM	8426	CG	PRO E 406	58.228	67.270	46.164	1.00	53.88	C
ATOM	8427	CD	PRO E 406	56.744	66.938	46.023	1.00	54.30	C
ATOM	8428	N	ASNE 407	55.682	69.300	48.272	1.00	53.76	N
ATOM	8429	CA	ASNE 407	54.909	70.361	48.867	1.00	54.30	C
ATOM	8430	C	ASNE 407	53.465	69.995	49.121	1.00	55.11	C
ATOM	8431	O	ASNE 407	52.622	70.904	49.123	1.00	56.53	O
ATOM	8432	CB	ASNE 407	55.011	71.560	47.924	1.00	55.00	C
ATOM	8433	CG	ASNE 407	54.181	71.361	46.688	1.00	55.76	C
ATOM	8434	OD1	ASNE 407	54.138	70.284	46.113	1.00	57.06	O
ATOM	8435	ND2	ASNE 407	53.492	72.405	46.279	1.00	57.34	N
ATOM	8436	N	LEU E 408	53.107	68.731	49.307	1.00	55.09	N
ATOM	8437	CA	LEU E 408	51.700	68.394	49.595	1.00	54.77	C
ATOM	8438	C	LEU E 408	51.803	67.205	50.563	1.00	55.74	C
ATOM	8439	O	LEU E 408	52.083	66.123	50.085	1.00	56.28	O
ATOM	8440	CB	LEU E 408	50.797	68.071	48.453	1.00	53.54	C
ATOM	8441	CG	LEU E 408	49.357	67.658	48.721	1.00	52.83	C
ATOM	8442	CD1	LEU E 408	48.613	68.523	49.692	1.00	51.64	C
ATOM	8443	CD2	LEU E 408	48.579	67.655	47.396	1.00	53.46	C
ATOM	8444	N	LEU E 409	51.637	67.479	51.860	1.00	56.09	N
ATOM	8445	CA	LEU E 409	51.790	66.390	52.829	1.00	55.60	C
ATOM	8446	C	LEU E 409	50.546	66.225	53.671	1.00	55.76	C
ATOM	8447	O	LEU E 409	50.441	66.799	54.737	1.00	56.37	O
ATOM	8448	CB	LEU E 409	53.027	66.737	53.616	1.00	55.29	C
ATOM	8449	CG	LEU E 409	53.557	65.981	54.811	1.00	54.70	C
ATOM	8450	CD1	LEU E 409	53.370	64.493	54.726	1.00	54.26	C
ATOM	8451	CD2	LEU E 409	55.061	66.263	54.928	1.00	55.29	C
ATOM	8452	N	LEU E 410	49.574	65.443	53.205	1.00	56.47	N
ATOM	8453	CA	LEU E 410	48.342	65.262	53.952	1.00	56.35	C
ATOM	8454	C	LEU E 410	48.637	64.342	55.114	1.00	58.87	C
ATOM	8455	O	LEU E 410	49.603	63.582	55.135	1.00	59.73	O
ATOM	8456	CB	LEU E 410	47.193	64.774	53.099	1.00	54.74	C
ATOM	8457	CG	LEU E 410	47.035	65.606	51.825	1.00	54.12	C
ATOM	8458	CD1	LEU E 410	45.915	65.082	50.962	1.00	54.60	C
ATOM	8459	CD2	LEU E 410	46.804	67.054	52.215	1.00	53.95	C

ATOM	8460	N	ASPE 411	47.752	64.485	56.074	1.00	61.30	N
ATOM	8461	CA	ASPE 411	47.819	63.751	57.331	1.00	63.65	C
ATOM	8462	C	ASPE 411	46.596	62.868	57.369	1.00	63.58	C
ATOM	8463	O	ASPE 411	45.576	63.239	56.793	1.00	63.25	O
ATOM	8464	CB	ASPE 411	47.830	64.863	58.369	1.00	67.91	C
ATOM	8465	CG	ASPE 411	47.108	64.505	59.646	1.00	71.68	C
ATOM	8466	OD1	ASPE 411	45.871	64.345	59.572	1.00	72.74	O
ATOM	8467	OD2	ASPE 411	47.805	64.374	60.692	1.00	74.35	O
ATOM	8468	N	ARGE 412	46.647	61.730	58.048	1.00	64.05	N
ATOM	8469	CA	ARGE 412	45.516	60.820	58.074	1.00	63.76	C
ATOM	8470	C	ARGE 412	44.180	61.520	58.155	1.00	64.70	C
ATOM	8471	O	ARGE 412	43.297	61.348	57.325	1.00	64.93	O
ATOM	8472	CB	ARGE 412	45.600	59.824	59.223	1.00	63.42	C
ATOM	8473	CG	ARGE 412	44.248	59.199	59.472	1.00	63.66	C
ATOM	8474	CD	ARGE 412	44.327	57.942	60.287	1.00	65.18	C
ATOM	8475	NE	ARGE 412	43.131	57.111	60.148	1.00	65.92	N
ATOM	8476	CZ	ARGE 412	41.939	57.448	60.606	1.00	66.20	C
ATOM	8477	NH1	ARGE 412	41.794	58.610	61.230	1.00	67.37	N
ATOM	8478	NH2	ARGE 412	40.938	56.614	60.422	1.00	66.29	N
ATOM	8479	N	ASNE 413	43.951	62.322	59.166	1.00	66.80	N
ATOM	8480	CA	ASNE 413	42.668	62.990	59.349	1.00	69.06	C
ATOM	8481	C	ASNE 413	42.239	63.822	58.184	1.00	68.23	C
ATOM	8482	O	ASNE 413	41.028	63.956	57.977	1.00	68.98	O
ATOM	8483	CB	ASNE 413	42.750	63.822	60.641	1.00	73.12	C
ATOM	8484	CG	ASNE 413	43.196	62.845	61.739	1.00	76.48	C
ATOM	8485	OD1	ASNE 413	42.371	61.991	62.119	1.00	77.41	O
ATOM	8486	ND2	ASNE 413	44.462	62.995	62.152	1.00	77.52	N
ATOM	8487	N	GLNE 414	43.120	64.355	57.350	1.00	66.97	N
ATOM	8488	CA	GLNE 414	42.692	65.153	56.209	1.00	66.65	C
ATOM	8489	C	GLNE 414	41.986	64.274	55.191	1.00	66.45	C
ATOM	8490	O	GLNE 414	41.239	64.711	54.317	1.00	65.91	O
ATOM	8491	CB	GLNE 414	43.847	65.928	55.639	1.00	67.46	C
ATOM	8492	CG	GLNE 414	44.811	66.473	56.671	1.00	68.87	C
ATOM	8493	CD	GLNE 414	45.644	67.565	56.024	1.00	70.99	C
ATOM	8494	OE1	GLNE 414	46.878	67.567	56.019	1.00	72.40	O
ATOM	8495	NE2	GLNE 414	44.938	68.533	55.447	1.00	71.87	N
ATOM	8496	N	GLYE 415	42.168	62.970	55.323	1.00	66.68	N
ATOM	8497	CA	GLYE 415	41.499	61.954	54.543	1.00	66.97	C
ATOM	8498	C	GLYE 415	40.006	62.128	54.774	1.00	67.14	C
ATOM	8499	O	GLYE 415	39.247	62.131	53.803	1.00	67.46	O
ATOM	8500	N	LYSE 416	39.523	62.359	55.986	1.00	67.79	N
ATOM	8501	CA	LYSE 416	38.104	62.560	56.234	1.00	68.85	C
ATOM	8502	C	LYSE 416	37.452	63.628	55.364	1.00	68.14	C
ATOM	8503	O	LYSE 416	36.226	63.651	55.208	1.00	67.32	O
ATOM	8504	CB	LYSE 416	37.860	62.868	57.703	1.00	71.08	C

ATOM	8505	CG	LYSE 416	38.708	62.042	58.641	1.00	74.66	C
ATOM	8506	CD	LYSE 416	37.872	61.379	59.724	1.00	77.68	C
ATOM	8507	CE	LYSE 416	38.165	61.959	61.103	1.00	80.25	C
ATOM	8508	NZ	LYSE 416	39.365	61.334	61.753	1.00	82.62	N
ATOM	8509	N	CYSE 417	38.193	64.535	54.744	1.00	67.34	N
ATOM	8510	CA	CYSE 417	37.629	65.560	53.895	1.00	67.24	C
ATOM	8511	C	CYSE 417	36.866	64.908	52.769	1.00	65.36	C
ATOM	8512	O	CYSE 417	35.771	65.380	52.469	1.00	66.59	O
ATOM	8513	CB	CYSE 417	38.722	66.539	53.457	1.00	69.38	C
ATOM	8514	SG	CYSE 417	39.355	67.479	54.900	1.00	74.04	S
ATOM	8515	N	VALE 418	37.350	63.853	52.141	1.00	63.31	N
ATOM	8516	CA	VALE 418	36.658	63.184	51.054	1.00	60.57	C
ATOM	8517	C	VALE 418	35.994	61.907	51.541	1.00	60.34	C
ATOM	8518	O	VALE 418	36.608	61.182	52.293	1.00	59.16	O
ATOM	8519	CB	VALE 418	37.604	62.859	49.901	1.00	59.16	C
ATOM	8520	CG1	VALE 418	36.927	62.062	48.805	1.00	58.97	C
ATOM	8521	CG2	VALE 418	38.147	64.151	49.318	1.00	58.63	C
ATOM	8522	N	GLUE 419	34.773	61.664	51.136	1.00	62.30	N
ATOM	8523	CA	GLUE 419	33.967	60.513	51.471	1.00	65.39	C
ATOM	8524	C	GLUE 419	34.668	59.207	51.171	1.00	64.79	C
ATOM	8525	O	GLUE 419	35.275	58.988	50.122	1.00	65.46	O
ATOM	8526	CB	GLUE 419	32.700	60.554	50.628	1.00	70.25	C
ATOM	8527	CG	GLUE 419	31.397	60.207	51.316	1.00	76.71	C
ATOM	8528	CD	GLUE 419	30.289	59.850	50.330	1.00	80.65	C
ATOM	8529	OE1	GLUE 419	30.259	60.410	49.200	1.00	82.59	O
ATOM	8530	OE2	GLUE 419	29.420	58.996	50.660	1.00	82.71	O
ATOM	8531	N	GLYE 420	34.663	58.263	52.095	1.00	63.96	N
ATOM	8532	CA	GLYE 420	35.329	57.000	51.876	1.00	63.44	C
ATOM	8533	C	GLYE 420	36.825	56.991	51.685	1.00	62.43	C
ATOM	8534	O	GLYE 420	37.362	55.901	51.460	1.00	63.54	O
ATOM	8535	N	METE 421	37.589	58.040	51.788	1.00	61.69	N
ATOM	8536	CA	METE 421	39.015	58.104	51.653	1.00	61.14	C
ATOM	8537	C	METE 421	39.878	57.691	52.826	1.00	60.36	C
ATOM	8538	O	METE 421	41.021	57.282	52.649	1.00	60.75	O
ATOM	8539	CB	METE 421	39.400	59.586	51.439	1.00	62.19	C
ATOM	8540	CG	METE 421	39.464	59.848	49.952	1.00	63.76	C
ATOM	8541	SD	METE 421	41.214	59.747	49.509	1.00	64.70	S
ATOM	8542	CE	METE 421	41.583	61.487	49.813	1.00	65.67	C
ATOM	8543	N	VALE 422	39.411	57.829	54.048	1.00	60.12	N
ATOM	8544	CA	VALE 422	40.143	57.500	55.249	1.00	59.26	C
ATOM	8545	C	VALE 422	40.593	56.051	55.239	1.00	58.74	C
ATOM	8546	O	VALE 422	41.732	55.886	55.666	1.00	58.75	O
ATOM	8547	CB	VALE 422	39.340	57.632	56.564	1.00	59.81	C
ATOM	8548	CG1	VALE 422	40.170	58.363	57.610	1.00	60.12	C
ATOM	8549	CG2	VALE 422	38.025	58.347	56.309	1.00	60.75	C

ATOM	8550	N	GLU E 423	39.739	55.125	54.804	1.00	57.81	N
ATOM	8551	CA	GLU E 423	40.127	53.727	54.792	1.00	58.23	C
ATOM	8552	C	GLU E 423	41.281	53.498	53.819	1.00	55.38	C
ATOM	8553	O	GLU E 423	42.217	52.767	54.120	1.00	54.90	O
ATOM	8554	CB	GLU E 423	39.014	52.779	54.396	1.00	63.04	C
ATOM	8555	CG	GLU E 423	37.777	52.932	55.260	1.00	69.79	C
ATOM	8556	CD	GLU E 423	36.871	54.029	54.697	1.00	74.22	C
ATOM	8557	OE1	GLU E 423	37.159	55.247	54.849	1.00	74.78	O
ATOM	8558	OE2	GLU E 423	35.839	53.636	54.066	1.00	77.24	O
ATOM	8559	N	ILE E 424	41.175	54.147	52.664	1.00	51.41	N
ATOM	8560	CA	ILE E 424	42.266	54.040	51.697	1.00	47.98	C
ATOM	8561	C	ILE E 424	43.493	54.655	52.339	1.00	48.22	C
ATOM	8562	O	ILE E 424	44.569	54.017	52.381	1.00	49.81	O
ATOM	8563	CB	ILE E 424	41.809	54.691	50.412	1.00	46.43	C
ATOM	8564	CG1	ILE E 424	40.626	53.844	49.916	1.00	45.58	C
ATOM	8565	CG2	ILE E 424	42.919	54.746	49.387	1.00	46.53	C
ATOM	8566	CD1	ILE E 424	39.973	54.492	48.721	1.00	45.49	C
ATOM	8567	N	PHE E 425	43.404	55.835	52.944	1.00	46.64	N
ATOM	8568	CA	PHE E 425	44.559	56.416	53.614	1.00	46.97	C
ATOM	8569	C	PHE E 425	45.107	55.466	54.662	1.00	47.95	C
ATOM	8570	O	PHE E 425	46.309	55.306	54.875	1.00	48.59	O
ATOM	8571	CB	PHE E 425	44.198	57.739	54.285	1.00	46.71	C
ATOM	8572	CG	PHE E 425	44.315	58.934	53.392	1.00	46.51	C
ATOM	8573	CD1	PHE E 425	44.121	58.804	52.022	1.00	47.41	C
ATOM	8574	CD2	PHE E 425	44.606	60.166	53.908	1.00	45.89	C
ATOM	8575	CE1	PHE E 425	44.226	59.870	51.169	1.00	47.79	C
ATOM	8576	CE2	PHE E 425	44.713	61.243	53.061	1.00	47.82	C
ATOM	8577	CZ	PHE E 425	44.533	61.114	51.689	1.00	48.33	C
ATOM	8578	N	ASP E 426	44.209	54.801	55.378	1.00	49.18	N
ATOM	8579	CA	ASP E 426	44.641	53.882	56.435	1.00	50.32	C
ATOM	8580	C	ASP E 426	45.460	52.745	55.882	1.00	49.65	C
ATOM	8581	O	ASP E 426	46.560	52.514	56.382	1.00	50.94	O
ATOM	8582	CB	ASP E 426	43.444	53.475	57.263	1.00	52.85	C
ATOM	8583	CG	ASP E 426	43.164	54.520	58.338	1.00	55.13	C
ATOM	8584	OD1	ASP E 426	44.105	55.313	58.581	1.00	56.03	O
ATOM	8585	OD2	ASP E 426	42.050	54.547	58.918	1.00	55.96	O
ATOM	8586	N	MET E 427	45.012	52.091	54.829	1.00	48.06	N
ATOM	8587	CA	MET E 427	45.745	51.025	54.169	1.00	45.93	C
ATOM	8588	C	MET E 427	47.068	51.572	53.631	1.00	44.99	C
ATOM	8589	O	MET E 427	48.142	50.951	53.764	1.00	44.81	O
ATOM	8590	CB	MET E 427	44.866	50.475	53.055	1.00	46.28	C
ATOM	8591	CG	MET E 427	43.702	49.673	53.618	1.00	47.12	C
ATOM	8592	SD	MET E 427	42.667	48.932	52.337	1.00	49.01	S
ATOM	8593	CE	MET E 427	41.914	50.365	51.600	1.00	49.07	C
ATOM	8594	N	LEU E 428	47.014	52.774	53.049	1.00	42.52	N

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ATOM	8595	CA	LEU E 428	48.268	53.339	52.557	1.00	41.97	C
ATOM	8596	C	LEU E 428	49.234	53.533	53.710	1.00	42.31	C
ATOM	8597	O	LEU E 428	50.398	53.126	53.571	1.00	43.27	O
ATOM	8598	CB	LEU E 428	48.026	54.630	51.795	1.00	41.62	C
ATOM	8599	CG	LEU E 428	47.304	54.478	50.452	1.00	40.23	C
ATOM	8600	CD1	LEU E 428	46.808	55.825	49.983	1.00	39.61	C
ATOM	8601	CD2	LEU E 428	48.271	53.875	49.453	1.00	40.11	C
ATOM	8602	N	LEU E 429	48.784	54.097	54.832	1.00	42.32	N
ATOM	8603	CA	LEU E 429	49.695	54.316	55.966	1.00	42.13	C
ATOM	8604	C	LEU E 429	50.303	53.027	56.474	1.00	41.73	C
ATOM	8605	O	LEU E 429	51.522	52.889	56.618	1.00	42.13	O
ATOM	8606	CB	LEU E 429	48.997	55.122	57.050	1.00	42.21	C
ATOM	8607	CG	LEU E 429	48.743	56.587	56.666	1.00	42.47	C
ATOM	8608	CD1	LEU E 429	47.706	57.199	57.578	1.00	42.17	C
ATOM	8609	CD2	LEU E 429	50.006	57.426	56.642	1.00	42.12	C
ATOM	8610	N	ALA E 430	49.476	52.023	56.684	1.00	41.47	N
ATOM	8611	CA	ALA E 430	49.927	50.709	57.111	1.00	42.24	C
ATOM	8612	C	ALA E 430	51.002	50.130	56.196	1.00	43.35	C
ATOM	8613	O	ALA E 430	51.941	49.496	56.695	1.00	43.89	O
ATOM	8614	CB	ALA E 430	48.738	49.757	57.062	1.00	42.20	C
ATOM	8615	N	THR E 431	50.863	50.314	54.877	1.00	42.68	N
ATOM	8616	CA	THR E 431	51.886	49.788	53.990	1.00	42.40	C
ATOM	8617	C	THR E 431	53.149	50.600	54.194	1.00	43.01	C
ATOM	8618	O	THR E 431	54.267	50.100	54.270	1.00	42.66	O
ATOM	8619	CB	THR E 431	51.500	49.991	52.523	1.00	42.40	C
ATOM	8620	OG1	THR E 431	50.165	49.495	52.408	1.00	43.64	O
ATOM	8621	CG2	THR E 431	52.445	49.277	51.594	1.00	42.04	C
ATOM	8622	N	SER E 432	52.895	51.914	54.285	1.00	44.22	N
ATOM	8623	CA	SER E 432	54.030	52.832	54.444	1.00	45.72	C
ATOM	8624	C	SER E 432	54.857	52.445	55.656	1.00	45.62	C
ATOM	8625	O	SER E 432	56.078	52.366	55.656	1.00	44.84	O
ATOM	8626	CB	SER E 432	53.569	54.272	54.448	1.00	45.63	C
ATOM	8627	OG	SER E 432	54.753	55.052	54.544	1.00	46.77	O
ATOM	8628	N	SER E 433	54.141	52.164	56.715	1.00	46.95	N
ATOM	8629	CA	SER E 433	54.705	51.722	57.965	1.00	49.92	C
ATOM	8630	C	SER E 433	55.450	50.400	57.864	1.00	50.55	C
ATOM	8631	O	SER E 433	56.573	50.223	58.340	1.00	50.04	O
ATOM	8632	CB	SER E 433	53.466	51.523	58.844	1.00	52.38	C
ATOM	8633	OG	SER E 433	53.946	51.508	60.181	1.00	56.50	O
ATOM	8634	N	ARG E 434	54.867	49.401	57.191	1.00	51.62	N
ATOM	8635	CA	ARG E 434	55.543	48.117	57.014	1.00	52.03	C
ATOM	8636	C	ARG E 434	56.826	48.346	56.234	1.00	52.24	C
ATOM	8637	O	ARG E 434	57.810	47.709	56.557	1.00	51.44	O
ATOM	8638	CB	ARG E 434	54.666	47.066	56.355	1.00	53.23	C
ATOM	8639	CG	ARG E 434	55.424	45.815	55.995	1.00	56.12	C

ATOM	8640	CD	ARG E 434	54.742	44.525	56.408	1.00	59.27	C
ATOM	8641	NE	ARG E 434	55.682	43.366	56.334	1.00	60.61	N
ATOM	8642	CZ	ARG E 434	56.551	43.176	57.327	1.00	60.77	C
ATOM	8643	NH1	ARG E 434	56.504	44.063	58.319	1.00	61.70	N
ATOM	8644	NH2	ARG E 434	57.407	42.174	57.336	1.00	61.04	N
ATOM	8645	N	PHE E 435	56.857	49.236	55.241	1.00	53.65	N
ATOM	8646	CA	PHE E 435	58.075	49.492	54.496	1.00	55.21	C
ATOM	8647	C	PHE E 435	59.110	50.101	55.429	1.00	57.28	C
ATOM	8648	O	PHE E 435	60.298	49.827	55.313	1.00	56.92	O
ATOM	8649	CB	PHE E 435	57.856	50.389	53.292	1.00	55.58	C
ATOM	8650	CG	PHE E 435	57.346	49.723	52.044	1.00	55.83	C
ATOM	8651	CD1	PHE E 435	57.272	48.349	51.909	1.00	55.27	C
ATOM	8652	CD2	PHE E 435	56.921	50.492	50.970	1.00	55.48	C
ATOM	8653	CE1	PHE E 435	56.791	47.753	50.771	1.00	54.62	C
ATOM	8654	CE2	PHE E 435	56.435	49.929	49.819	1.00	54.80	C
ATOM	8655	CZ	PHE E 435	56.374	48.548	49.732	1.00	55.27	C
ATOM	8656	N	ARG E 436	58.667	50.933	56.369	1.00	59.99	N
ATOM	8657	CA	ARG E 436	59.564	51.547	57.333	1.00	62.20	C
ATOM	8658	C	ARG E 436	60.182	50.457	58.189	1.00	62.86	C
ATOM	8659	O	ARG E 436	61.371	50.353	58.390	1.00	62.51	O
ATOM	8660	CB	ARG E 436	58.806	52.531	58.210	1.00	63.59	C
ATOM	8661	CG	ARG E 436	59.645	53.678	58.742	1.00	66.33	C
ATOM	8662	CD	ARG E 436	58.855	54.573	59.699	1.00	68.41	C
ATOM	8663	NE	ARG E 436	57.704	55.162	59.009	1.00	70.77	N
ATOM	8664	CZ	ARG E 436	56.438	54.917	59.357	1.00	71.97	C
ATOM	8665	NH1	ARG E 436	56.195	54.113	60.387	1.00	72.22	N
ATOM	8666	NH2	ARG E 436	55.429	55.469	58.682	1.00	72.49	N
ATOM	8667	N	MET E 437	59.352	49.583	58.719	1.00	65.85	N
ATOM	8668	CA	MET E 437	59.780	48.495	59.572	1.00	68.28	C
ATOM	8669	C	MET E 437	60.781	47.598	58.902	1.00	66.41	C
ATOM	8670	O	MET E 437	61.737	47.225	59.562	1.00	67.60	O
ATOM	8671	CB	MET E 437	58.597	47.637	60.008	1.00	73.91	C
ATOM	8672	CG	MET E 437	57.707	48.311	61.065	1.00	79.87	C
ATOM	8673	SD	MET E 437	56.733	47.053	61.927	1.00	86.12	S
ATOM	8674	CE	MET E 437	55.761	46.302	60.604	1.00	84.74	C
ATOM	8675	N	MET E 438	60.639	47.235	57.653	1.00	64.77	N
ATOM	8676	CA	MET E 438	61.542	46.352	56.940	1.00	62.86	C
ATOM	8677	C	MET E 438	62.758	47.063	56.394	1.00	62.06	C
ATOM	8678	O	MET E 438	63.655	46.472	55.819	1.00	61.19	O
ATOM	8679	CB	MET E 438	60.834	45.849	55.687	1.00	63.11	C
ATOM	8680	CG	MET E 438	59.521	45.168	56.012	1.00	63.13	C
ATOM	8681	SD	MET E 438	59.094	44.081	54.691	1.00	64.84	S
ATOM	8682	CE	MET E 438	60.614	43.488	53.985	1.00	64.56	C
ATOM	8683	N	ASN E 439	62.714	48.366	56.549	1.00	62.91	N
ATOM	8684	CA	ASN E 439	63.787	49.228	56.103	1.00	64.19	C

ATOM	8685	C	ASN E 439	64.112	48.914	54.655	1.00	61.97	C
ATOM	8686	O	ASN E 439	65.174	48.473	54.272	1.00	61.01	O
ATOM	8687	CB	ASN E 439	64.965	49.037	57.050	1.00	69.04	C
ATOM	8688	CG	ASN E 439	66.069	49.996	56.631	1.00	74.29	C
ATOM	8689	OD1	ASN E 439	67.261	49.719	56.850	1.00	77.44	O
ATOM	8690	ND2	ASN E 439	65.708	51.122	56.002	1.00	75.90	N
ATOM	8691	N	LEU E 440	63.095	49.158	53.842	1.00	60.31	N
ATOM	8692	CA	LEU E 440	63.100	48.925	52.419	1.00	58.53	C
ATOM	8693	C	LEU E 440	64.075	49.893	51.763	1.00	58.79	C
ATOM	8694	O	LEU E 440	64.050	51.097	51.972	1.00	57.62	O
ATOM	8695	CB	LEU E 440	61.696	49.073	51.835	1.00	57.03	C
ATOM	8696	CG	LEU E 440	61.527	49.015	50.322	1.00	55.64	C
ATOM	8697	CD1	LEU E 440	61.714	47.600	49.806	1.00	55.02	C
ATOM	8698	CD2	LEU E 440	60.170	49.563	49.943	1.00	55.48	C
ATOM	8699	N	GLN E 441	64.932	49.282	50.954	1.00	59.74	N
ATOM	8700	CA	GLN E 441	65.931	50.030	50.221	1.00	60.70	C
ATOM	8701	C	GLN E 441	65.420	50.559	48.899	1.00	59.63	C
ATOM	8702	O	GLN E 441	64.531	49.965	48.304	1.00	60.76	O
ATOM	8703	CB	GLN E 441	67.055	49.048	49.880	1.00	63.18	C
ATOM	8704	CG	GLN E 441	67.818	48.551	51.081	1.00	66.06	C
ATOM	8705	CD	GLN E 441	68.152	49.659	52.057	1.00	67.29	C
ATOM	8706	OE1	GLN E 441	69.019	50.465	51.717	1.00	68.62	O
ATOM	8707	NE2	GLN E 441	67.468	49.667	53.201	1.00	67.74	N
ATOM	8708	N	GLY E 442	66.031	51.592	48.365	1.00	58.52	N
ATOM	8709	CA	GLY E 442	65.633	52.120	47.076	1.00	57.64	C
ATOM	8710	C	GLY E 442	65.851	51.119	45.958	1.00	57.04	C
ATOM	8711	O	GLY E 442	65.050	51.047	45.019	1.00	56.91	O
ATOM	8712	N	GLU E 443	66.909	50.320	45.995	1.00	57.11	N
ATOM	8713	CA	GLU E 443	67.138	49.347	44.929	1.00	58.28	C
ATOM	8714	C	GLU E 443	65.994	48.322	44.966	1.00	55.34	C
ATOM	8715	O	GLU E 443	65.558	47.862	43.918	1.00	55.03	O
ATOM	8716	CB	GLU E 443	68.438	48.560	44.970	1.00	62.36	C
ATOM	8717	CG	GLU E 443	69.764	49.292	45.064	1.00	65.75	C
ATOM	8718	CD	GLU E 443	69.775	50.228	46.271	1.00	68.27	C
ATOM	8719	OE1	GLU E 443	69.363	49.865	47.395	1.00	67.95	O
ATOM	8720	OE2	GLU E 443	70.198	51.384	46.023	1.00	70.83	O
ATOM	8721	N	GLU E 444	65.552	47.997	46.165	1.00	52.18	N
ATOM	8722	CA	GLU E 444	64.442	47.073	46.329	1.00	49.72	C
ATOM	8723	C	GLU E 444	63.175	47.714	45.785	1.00	47.73	C
ATOM	8724	O	GLU E 444	62.420	47.101	45.020	1.00	47.23	O
ATOM	8725	CB	GLU E 444	64.260	46.724	47.805	1.00	49.92	C
ATOM	8726	CG	GLU E 444	65.347	45.763	48.284	1.00	49.35	C
ATOM	8727	CD	GLU E 444	65.294	45.603	49.788	1.00	49.38	C
ATOM	8728	OE1	GLU E 444	65.044	46.622	50.472	1.00	48.44	O
ATOM	8729	OE2	GLU E 444	65.500	44.430	50.172	1.00	49.87	O

ATOM 8730 N PHE E 445	62.973 48.969 46.192 1.00 45.85	N
ATOM 8731 CA PHE E 445	61.777 49.707 45.775 1.00 44.80	C
ATOM 8732 C PHE E 445	61.576 49.615 44.275 1.00 45.78	C
ATOM 8733 O PHE E 445	60.573 49.140 43.752 1.00 46.63	O
ATOM 8734 CB PHE E 445	61.848 51.154 46.205 1.00 43.02	C
ATOM 8735 CG PHE E 445	60.831 52.044 45.569 1.00 43.23	C
ATOM 8736 CD1 PHE E 445	59.476 51.796 45.716 1.00 44.18	C
ATOM 8737 CD2 PHE E 445	61.198 53.137 44.817 1.00 43.23	C
ATOM 8738 CE1 PHE E 445	58.511 52.599 45.142 1.00 43.74	C
ATOM 8739 CE2 PHE E 445	60.260 53.959 44.224 1.00 43.01	C
ATOM 8740 CZ PHE E 445	58.924 53.684 44.396 1.00 43.58	C
ATOM 8741 N VAL E 446	62.579 50.068 43.545 1.00 46.16	N
ATOM 8742 CA VAL E 446	62.630 50.077 42.088 1.00 45.68	C
ATOM 8743 C VAL E 446	62.362 48.707 41.495 1.00 46.43	C
ATOM 8744 O VAL E 446	61.741 48.586 40.426 1.00 47.33	O
ATOM 8745 CB VAL E 446	63.991 50.727 41.796 1.00 45.32	C
ATOM 8746 CG1 VAL E 446	64.914 49.963 40.872 1.00 45.72	C
ATOM 8747 CG2 VAL E 446	63.724 52.122 41.284 1.00 45.43	C
ATOM 8748 N CYS E 447	62.769 47.617 42.126 1.00 45.86	N
ATOM 8749 CA CYSE 447	62.510 46.308 41.588 1.00 47.15	C
ATOM 8750 C CYS E 447	61.044 45.938 41.706 1.00 47.41	C
ATOM 8751 O CYS E 447	60.444 45.386 40.804 1.00 47.17	O
ATOM 8752 CB CYSE 447	63.340 45.289 42.408 1.00 48.11	C
ATOM 8753 SG CYSE 447	65.012 45.131 41.773 1.00 48.83	S
ATOM 8754 N LEU E 448	60.468 46.211 42.884 1.00 48.29	N
ATOM 8755 CA LEU E 448	59.075 45.863 43.186 1.00 46.52	C
ATOM 8756 C LEU E 448	58.158 46.558 42.207 1.00 44.79	C
ATOM 8757 O LEU E 448	57.273 45.984 41.603 1.00 45.09	O
ATOM 8758 CB LEU E 448	58.711 46.262 44.602 1.00 46.56	C
ATOM 8759 CG LEU E 448	59.263 45.396 45.726 1.00 47.45	C
ATOM 8760 CD1 LEU E 448	58.865 46.048 47.051 1.00 49.15	C
ATOM 8761 CD2 LEU E 448	58.698 43.984 45.668 1.00 47.57	C
ATOM 8762 N LYS E 449	58.456 47.831 42.014 1.00 43.50	N
ATOM 8763 CA LYS E 449	57.700 48.661 41.087 1.00 42.55	C
ATOM 8764 C LYS E 449	57.667 48.014 39.725 1.00 41.51	C
ATOM 8765 O LYS E 449	56.576 47.973 39.148 1.00 41.11	O
ATOM 8766 CB LYS E 449	58.259 50.070 41.163 1.00 43.23	C
ATOM 8767 CG LYS E 449	57.213 51.131 40.878 1.00 44.11	C
ATOM 8768 CD LYS E 449	57.814 52.207 40.038 1.00 45.17	C
ATOM 8769 CE LYS E 449	58.566 53.240 40.879 1.00 46.14	C
ATOM 8770 NZ LYS E 449	58.905 54.311 39.862 1.00 47.75	N
ATOM 8771 N SER E 450	58.762 47.480 39.200 1.00 41.28	N
ATOM 8772 CA SER E 450	58.747 46.784 37.917 1.00 41.19	C
ATOM 8773 C SER E 450	58.009 45.447 37.965 1.00 39.26	C
ATOM 8774 O SER E 450	57.345 45.088 37.013 1.00 38.89	O

ATOM	8775	CB	SER E 450	60.151	46.414	37.429	1.00	41.77	C
ATOM	8776	OG	SER E 450	60.812	47.665	37.489	1.00	45.16	O
ATOM	8777	N	ILE E 451	58.116	44.741	39.066	1.00	37.81	N
ATOM	8778	CA	ILE E 451	57.411	43.491	39.217	1.00	38.28	C
ATOM	8779	C	ILE E 451	55.942	43.845	39.068	1.00	38.66	C
ATOM	8780	O	ILE E 451	55.260	43.153	38.304	1.00	39.09	O
ATOM	8781	CB	ILE E 451	57.677	42.804	40.566	1.00	39.44	C
ATOM	8782	CG1	ILE E 451	59.159	42.383	40.551	1.00	40.75	C
ATOM	8783	CG2	ILE E 451	56.735	41.649	40.826	1.00	36.95	C
ATOM	8784	CD1	ILE E 451	59.537	41.446	41.683	1.00	42.44	C
ATOM	8785	N	ILE E 452	55.482	44.895	39.773	1.00	38.03	N
ATOM	8786	CA	ILE E 452	54.077	45.292	39.670	1.00	36.73	C
ATOM	8787	C	ILE E 452	53.667	45.590	38.228	1.00	37.55	C
ATOM	8788	O	ILE E 452	52.630	45.154	37.740	1.00	37.79	O
ATOM	8789	CB	ILE E 452	53.778	46.525	40.539	1.00	35.25	C
ATOM	8790	CG1	ILE E 452	54.042	46.194	41.990	1.00	34.33	C
ATOM	8791	CG2	ILE E 452	52.343	46.998	40.308	1.00	35.46	C
ATOM	8792	CD1	ILE E 452	53.496	47.137	43.035	1.00	33.49	C
ATOM	8793	N	LEU E 453	54.469	46.343	37.480	1.00	37.40	N
ATOM	8794	CA	LEU E 453	54.144	46.673	36.120	1.00	37.51	C
ATOM	8795	C	LEU E 453	54.016	45.399	35.317	1.00	39.84	C
ATOM	8796	O	LEU E 453	53.143	45.302	34.468	1.00	41.15	O
ATOM	8797	CB	LEU E 453	55.216	47.577	35.480	1.00	36.14	C
ATOM	8798	CG	LEU E 453	55.078	47.731	33.950	1.00	34.66	C
ATOM	8799	CD1	LEU E 453	53.789	48.461	33.614	1.00	33.30	C
ATOM	8800	CD2	LEU E 453	56.293	48.419	33.373	1.00	33.44	C
ATOM	8801	N	LEU E 454	54.913	44.438	35.483	1.00	42.17	N
ATOM	8802	CA	LEU E 454	54.884	43.238	34.678	1.00	43.70	C
ATOM	8803	C	LEU E 454	53.940	42.135	35.110	1.00	44.73	C
ATOM	8804	O	LEU E 454	53.478	41.386	34.231	1.00	45.81	O
ATOM	8805	CB	LEU E 454	56.313	42.619	34.636	1.00	43.59	C
ATOM	8806	CG	LEU E 454	57.256	43.422	33.739	1.00	44.11	C
ATOM	8807	CD1	LEU E 454	58.696	43.048	34.044	1.00	44.82	C
ATOM	8808	CD2	LEU E 454	56.946	43.117	32.280	1.00	44.72	C
ATOM	8809	N	ASNE 455	53.681	41.966	36.397	1.00	44.67	N
ATOM	8810	CA	ASNE 455	52.869	40.827	36.797	1.00	45.18	C
ATOM	8811	C	ASNE 455	51.424	41.141	36.932	1.00	47.23	C
ATOM	8812	O	ASNE 455	50.636	40.216	36.942	1.00	48.88	O
ATOM	8813	CB	ASNE 455	53.419	40.284	38.114	1.00	45.05	C
ATOM	8814	CG	ASNE 455	52.544	39.391	38.943	1.00	44.88	C
ATOM	8815	OD1	ASNE 455	51.977	39.852	39.945	1.00	44.69	O
ATOM	8816	ND2	ASNE 455	52.423	38.128	38.532	1.00	45.24	N
ATOM	8817	N	SER E 456	51.007	42.368	37.060	1.00	51.07	N
ATOM	8818	CA	SER E 456	49.584	42.600	37.276	1.00	54.67	C
ATOM	8819	C	SER E 456	48.726	42.201	36.124	1.00	57.34	C

ATOM	8820	O	SER E 456	47.729	41.484	36.251	1.00	60.01	O
ATOM	8821	CB	SER E 456	49.364	44.032	37.754	1.00	55.11	C
ATOM	8822	OG	SER E 456	49.674	44.134	39.133	1.00	54.61	O
ATOM	8823	N	GLY E 457	49.004	42.608	34.919	1.00	60.38	N
ATOM	8824	CA	GLY E 457	48.129	42.260	33.798	1.00	64.14	C
ATOM	8825	C	GLY E 457	48.515	41.006	33.045	1.00	65.86	C
ATOM	8826	O	GLY E 457	47.944	40.834	31.957	1.00	65.56	O
ATOM	8827	N	VAL E 458	49.425	40.210	33.596	1.00	67.97	N
ATOM	8828	CA	VAL E 458	49.868	39.019	32.903	1.00	71.23	C
ATOM	8829	C	VAL E 458	48.824	37.951	32.696	1.00	74.98	C
ATOM	8830	O	VAL E 458	48.846	37.316	31.620	1.00	76.05	O
ATOM	8831	CB	VAL E 458	51.173	38.474	33.487	1.00	70.27	C
ATOM	8832	CG1	VAL E 458	51.000	37.726	34.770	1.00	68.98	C
ATOM	8833	CG2	VAL E 458	51.843	37.570	32.447	1.00	70.96	C
ATOM	8834	N	TYR E 459	47.851	37.716	33.554	1.00	79.48	N
ATOM	8835	CA	TYR E 459	46.801	36.725	33.382	1.00	84.01	C
ATOM	8836	C	TYR E 459	45.635	37.251	32.567	1.00	86.11	C
ATOM	8837	O	TYR E 459	44.547	36.689	32.687	1.00	87.09	O
ATOM	8838	CB	TYR E 459	46.188	36.205	34.719	1.00	85.54	C
ATOM	8839	CG	TYR E 459	47.370	35.726	35.539	1.00	88.44	C
ATOM	8840	CD1	TYR E 459	48.111	36.698	36.204	1.00	89.50	C
ATOM	8841	CD2	TYR E 459	47.823	34.424	35.638	1.00	89.47	C
ATOM	8842	CE1	TYR E 459	49.219	36.275	36.876	1.00	90.68	C
ATOM	8843	CE2	TYR E 459	48.948	34.066	36.372	1.00	90.42	C
ATOM	8844	CZ	TYR E 459	49.673	35.017	37.045	1.00	91.07	C
ATOM	8845	OH	TYR E 459	50.804	34.835	37.811	1.00	91.35	O
ATOM	8846	N	THR E 460	45.816	38.308	31.793	1.00	88.41	N
ATOM	8847	CA	THR E 460	44.735	38.894	31.022	1.00	91.17	C
ATOM	8848	C	THR E 460	45.242	39.429	29.693	1.00	92.86	C
ATOM	8849	O	THR E 460	44.875	40.522	29.247	1.00	93.81	O
ATOM	8850	CB	THR E 460	44.058	40.024	31.818	1.00	91.35	C
ATOM	8851	OG1	THR E 460	44.688	40.271	33.075	1.00	92.02	O
ATOM	8852	CG2	THR E 460	42.622	39.640	32.135	1.00	91.98	C
ATOM	8853	N	PHE E 461	46.098	38.646	29.038	1.00	94.55	N
ATOM	8854	CA	PHE E 461	46.656	39.112	27.775	1.00	95.80	C
ATOM	8855	C	PHE E 461	45.738	39.274	26.580	1.00	97.31	C
ATOM	8856	O	PHE E 461	45.871	40.307	25.864	1.00	98.52	O
ATOM	8857	CB	PHE E 461	47.952	38.328	27.466	1.00	94.82	C
ATOM	8858	CG	PHE E 461	49.092	39.224	27.891	1.00	94.07	C
ATOM	8859	CD1	PHE E 461	48.944	40.596	27.851	1.00	94.00	C
ATOM	8860	CD2	PHE E 461	50.285	38.714	28.324	1.00	94.41	C
ATOM	8861	CE1	PHE E 461	49.941	41.453	28.227	1.00	94.40	C
ATOM	8862	CE2	PHE E 461	51.310	39.562	28.702	1.00	94.59	C
ATOM	8863	CZ	PHE E 461	51.145	40.931	28.653	1.00	94.60	C
ATOM	8864	N	THR E 465	46.792	34.388	20.855	1.00	127.98	N

ATOM	8865	CA	THR E 465	47.001	33.276	21.784	1.00127.92	C
ATOM	8866	C	THR E 465	48.437	32.771	21.760	1.00126.90	C
ATOM	8867	O	THR E 465	49.171	32.986	22.734	1.00127.57	O
ATOM	8868	CB	THR E 465	46.057	32.091	21.526	1.00128.62	C
ATOM	8869	OG1	THR E 465	46.652	30.878	22.015	1.00128.85	O
ATOM	8870	CG2	THR E 465	45.724	31.947	20.051	1.00129.15	C
ATOM	8871	N	LEU E 466	48.894	32.147	20.677	1.00124.80	N
ATOM	8872	CA	LEU E 466	50.282	31.668	20.608	1.00122.43	C
ATOM	8873	C	LEU E 466	51.285	32.802	20.827	1.00120.18	C
ATOM	8874	O	LEU E 466	52.355	32.585	21.413	1.00120.09	O
ATOM	8875	CB	LEU E 466	50.529	30.930	19.293	1.00122.67	C
ATOM	8879	N	LYS E 467	50.948	34.024	20.388	1.00116.78	N
ATOM	8880	CA	LYS E 467	51.786	35.193	20.620	1.00113.09	C
ATOM	8881	C	LYS E 467	51.642	35.514	22.114	1.00109.31	C
ATOM	8882	O	LYS E 467	52.603	35.953	22.740	1.00109.27	O
ATOM	8883	CB	LYS E 467	51.418	36.396	19.772	1.00114.44	C
ATOM	8884	CG	LYS E 467	52.515	37.429	19.562	1.00115.60	C
ATOM	8885	CD	LYS E 467	51.923	38.725	19.019	1.00117.06	C
ATOM	8886	CE	LYS E 467	52.094	38.930	17.523	1.00117.84	C
ATOM	8887	NZ	LYS E 467	51.291	40.110	17.040	1.00117.85	N
ATOM	8888	N	SER E 468	50.467	35.264	22.689	1.00104.19	N
ATOM	8889	CA	SER E 468	50.220	35.488	24.095	1.00100.08	C
ATOM	8890	C	SER E 468	51.034	34.533	24.965	1.00 96.75	C
ATOM	8891	O	SER E 468	51.551	34.894	26.016	1.00 96.60	O
ATOM	8892	CB	SER E 468	48.758	35.266	24.491	1.00100.27	C
ATOM	8893	OG	SER E 468	47.938	36.279	23.954	1.00101.24	O
ATOM	8894	N	LEU E 469	51.138	33.294	24.504	1.00 92.82	N
ATOM	8895	CA	LEU E 469	51.890	32.278	25.235	1.00 89.41	C
ATOM	8896	C	LEU E 469	53.354	32.681	25.198	1.00 87.00	C
ATOM	8897	O	LEU E 469	54.092	32.455	26.147	1.00 86.58	O
ATOM	8898	CB	LEU E 469	51.628	30.888	24.663	1.00 89.70	C
ATOM	8902	N	GLU E 470	53.784	33.307	24.111	1.00 84.85	N
ATOM	8903	CA	GLU E 470	55.169	33.762	23.995	1.00 83.18	C
ATOM	8904	C	GLU E 470	55.307	35.050	24.783	1.00 78.98	C
ATOM	8905	O	GLU E 470	56.319	35.293	25.418	1.00 78.25	O
ATOM	8906	CB	GLU E 470	55.541	33.829	22.538	1.00 87.28	C
ATOM	8907	CG	GLU E 470	56.196	35.110	22.067	1.00 93.08	C
ATOM	8908	CD	GLU E 470	56.134	35.283	20.553	1.00 96.47	C
ATOM	8909	OE1	GLU E 470	55.328	34.582	19.878	1.00 98.20	O
ATOM	8910	OE2	GLU E 470	56.911	36.135	20.052	1.00 98.08	O
ATOM	8911	N	GLU E 471	54.283	35.888	24.816	1.00 74.96	N
ATOM	8912	CA	GLU E 471	54.280	37.123	25.586	1.00 71.37	C
ATOM	8913	C	GLU E 471	54.343	36.754	27.068	1.00 69.96	C
ATOM	8914	O	GLU E 471	55.099	37.332	27.848	1.00 70.04	O
ATOM	8915	CB	GLU E 471	53.037	37.965	25.326	1.00 69.94	C

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ATOM	8916	CG	GLU E 471	52.924	38.638	23.996	1.00	69.36	C
ATOM	8917	CD	GLU E 471	53.394	40.051	23.826	1.00	69.39	C
ATOM	8918	OE1	GLU E 471	52.784	41.001	24.326	1.00	69.14	O
ATOM	8919	OE2	GLU E 471	54.416	40.364	23.176	1.00	70.37	O
ATOM	8920	N	LYS E 472	53.544	35.771	27.478	1.00	68.55	N
ATOM	8921	CA	LYS E 472	53.518	35.314	28.858	1.00	67.17	C
ATOM	8922	C	LYS E 472	54.868	34.745	29.264	1.00	65.30	C
ATOM	8923	O	LYS E 472	55.318	35.085	30.359	1.00	64.98	O
ATOM	8924	CB	LYS E 472	52.429	34.309	29.177	1.00	68.33	C
ATOM	8925	CG	LYS E 472	51.031	34.896	29.151	1.00	71.15	C
ATOM	8926	CD	LYS E 472	50.027	33.940	29.773	1.00	73.86	C
ATOM	8927	CE	LYS E 472	48.655	33.997	29.118	1.00	75.62	C
ATOM	8928	NZ	LYS E 472	47.784	35.057	29.728	1.00	76.89	N
ATOM	8929	N	ASP E 473	55.524	33.948	28.443	1.00	64.07	N
ATOM	8930	CA	ASP E 473	56.820	33.438	28.859	1.00	65.11	C
ATOM	8931	C	ASP E 473	57.850	34.541	29.054	1.00	62.82	C
ATOM	8932	O	ASP E 473	58.629	34.583	29.996	1.00	63.76	O
ATOM	8933	CB	ASP E 473	57.469	32.547	27.802	1.00	69.62	C
ATOM	8934	CG	ASP E 473	56.628	31.304	27.626	1.00	74.07	C
ATOM	8935	OD1	ASP E 473	55.637	31.124	28.383	1.00	76.21	O
ATOM	8936	OD2	ASP E 473	57.014	30.538	26.713	1.00	77.03	O
ATOM	8937	N	HIS E 474	57.876	35.440	28.081	1.00	58.83	N
ATOM	8938	CA	HIS E 474	58.814	36.539	28.137	1.00	55.30	C
ATOM	8939	C	HIS E 474	58.649	37.195	29.501	1.00	53.59	C
ATOM	8940	O	HIS E 474	59.604	37.364	30.247	1.00	51.60	O
ATOM	8941	CB	HIS E 474	58.506	37.480	26.962	1.00	54.90	C
ATOM	8942	CG	HIS E 474	59.483	38.618	27.039	1.00	54.40	C
ATOM	8943	ND1	HIS E 474	60.834	38.350	27.001	1.00	54.30	N
ATOM	8944	CD2	HIS E 474	59.285	39.946	27.206	1.00	54.56	C
ATOM	8945	CE1	HIS E 474	61.456	39.515	27.116	1.00	55.74	C
ATOM	8946	NE2	HIS E 474	60.544	40.485	27.241	1.00	56.00	N
ATOM	8947	N	ILE E 475	57.399	37.562	29.807	1.00	52.70	N
ATOM	8948	CA	ILE E 475	57.130	38.208	31.072	1.00	53.54	C
ATOM	8949	C	ILE E 475	57.588	37.384	32.266	1.00	53.35	C
ATOM	8950	O	ILE E 475	58.266	37.883	33.176	1.00	51.83	O
ATOM	8951	CB	ILE E 475	55.661	38.605	31.209	1.00	54.07	C
ATOM	8952	CG1	ILE E 475	55.412	39.754	30.223	1.00	54.24	C
ATOM	8953	CG2	ILE E 475	55.350	39.068	32.635	1.00	54.02	C
ATOM	8954	CD1	ILE E 475	53.963	40.235	30.346	1.00	55.26	C
ATOM	8955	N	HIS E 476	57.245	36.108	32.280	1.00	54.79	N
ATOM	8956	CA	HIS E 476	57.694	35.248	33.377	1.00	56.82	C
ATOM	8957	C	HIS E 476	59.208	35.239	33.476	1.00	57.12	C
ATOM	8958	O	HIS E 476	59.806	35.275	34.548	1.00	57.53	O
ATOM	8959	CB	HIS E 476	57.103	33.856	33.197	1.00	59.14	C
ATOM	8960	CG	HIS E 476	55.647	33.818	33.554	1.00	61.35	C

ATOM	8961	ND1 HIS E 476	55.162	34.427	34.699	1.00	62.16	N
ATOM	8962	CD2 HIS E 476	54.585	33.264	32.927	1.00	62.05	C
ATOM	8963	CE1 HIS E 476	53.841	34.236	34.733	1.00	62.92	C
ATOM	8964	NE2 HIS E 476	53.456	33.533	33.678	1.00	62.30	N
ATOM	8965	N ARGE 477	59.914	35.209	32.362	1.00	57.98	N
ATOM	8966	CA ARGE 477	61.342	35.220	32.256	1.00	58.02	C
ATOM	8967	C ARGE 477	61.969	36.454	32.867	1.00	55.67	C
ATOM	8968	O ARGE 477	62.922	36.364	33.622	1.00	56.06	O
ATOM	8969	CB ARGE 477	61.713	35.226	30.771	1.00	62.72	C
ATOM	8970	CG ARGE 477	62.916	34.325	30.544	1.00	68.93	C
ATOM	8971	CD ARGE 477	62.323	32.907	30.431	1.00	74.07	C
ATOM	8972	NE ARGE 477	61.522	32.895	29.202	1.00	79.55	N
ATOM	8973	CZ ARGE 477	62.084	32.880	27.978	1.00	82.67	C
ATOM	8974	NH1 ARGE 477	63.417	32.868	27.852	1.00	83.92	N
ATOM	8975	NH2 ARGE 477	61.270	32.874	26.912	1.00	83.54	N
ATOM	8976	N VALE 478	61.457	37.628	32.539	1.00	53.33	N
ATOM	8977	CA VALE 478	61.979	38.885	33.065	1.00	51.57	C
ATOM	8978	C VALE 478	61.718	38.952	34.560	1.00	51.33	C
ATOM	8979	O VALE 478	62.521	39.436	35.371	1.00	50.99	O
ATOM	8980	CB VALE 478	61.318	40.058	32.342	1.00	51.59	C
ATOM	8981	CG1 VALE 478	61.843	41.394	32.837	1.00	51.45	C
ATOM	8982	CG2 VALE 478	61.567	39.870	30.849	1.00	52.54	C
ATOM	8983	N LEUE 479	60.546	38.412	34.941	1.00	49.88	N
ATOM	8984	CA LEUE 479	60.155	38.337	36.338	1.00	48.08	C
ATOM	8985	C LEUE 479	61.167	37.502	37.124	1.00	49.08	C
ATOM	8986	O LEUE 479	61.475	37.835	38.287	1.00	49.48	O
ATOM	8987	CB LEUE 479	58.738	37.807	36.523	1.00	44.80	C
ATOM	8988	CG LEUE 479	57.638	38.850	36.416	1.00	43.44	C
ATOM	8989	CD1 LEUE 479	56.280	38.165	36.412	1.00	43.41	C
ATOM	8990	CD2 LEUE 479	57.664	39.894	37.513	1.00	42.27	C
ATOM	8991	N ASPE 480	61.718	36.448	36.508	1.00	49.49	N
ATOM	8992	CA ASPE 480	62.721	35.659	37.214	1.00	50.30	C
ATOM	8993	C ASPE 480	63.993	36.490	37.309	1.00	50.24	C
ATOM	8994	O ASPE 480	64.647	36.473	38.340	1.00	49.46	O
ATOM	8995	CB ASPE 480	63.032	34.332	36.570	1.00	51.42	C
ATOM	8996	CG ASPE 480	61.883	33.364	36.553	1.00	53.00	C
ATOM	8997	OD1 ASPE 480	61.007	33.431	37.432	1.00	54.16	O
ATOM	8998	OD2 ASPE 480	61.807	32.498	35.653	1.00	54.42	O
ATOM	8999	N LYSE 481	64.294	37.214	36.236	1.00	51.72	N
ATOM	9000	CA LYSE 481	65.507	38.038	36.234	1.00	54.39	C
ATOM	9001	C LYSE 481	65.403	39.049	37.363	1.00	52.96	C
ATOM	9002	O LYSE 481	66.364	39.147	38.115	1.00	53.28	O
ATOM	9003	CB LYSE 481	65.793	38.730	34.903	1.00	58.02	C
ATOM	9004	CG LYSE 481	67.175	39.344	34.731	1.00	62.09	C
ATOM	9005	CD LYSE 481	68.162	38.389	34.087	1.00	65.98	C

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ATOM	9006	CE	LYS	E 481	69.605	38.540	34.546	1.00	69.03	C
ATOM	9007	NZ	LYS	E 481	69.759	39.365	35.799	1.00	71.71	N
ATOM	9008	N	ILE	E 482	64.252	39.720	37.470	1.00	51.11	N
ATOM	9009	CA	ILE	E 482	64.085	40.703	38.535	1.00	48.85	C
ATOM	9010	C	ILE	E 482	64.168	40.007	39.872	1.00	47.88	C
ATOM	9011	O	ILE	E 482	64.789	40.547	40.798	1.00	47.61	O
ATOM	9012	CB	ILE	E 482	62.850	41.564	38.372	1.00	48.90	C
ATOM	9013	CG1	ILE	E 482	62.979	42.430	37.114	1.00	49.83	C
ATOM	9014	CG2	ILE	E 482	62.686	42.515	39.541	1.00	48.66	C
ATOM	9015	CD1	ILE	E 482	61.675	42.574	36.355	1.00	50.34	C
ATOM	9016	N	THR	E 483	63.635	38.800	39.991	1.00	47.59	N
ATOM	9017	CA	THR	E 483	63.789	38.092	41.270	1.00	49.09	C
ATOM	9018	C	THR	E 483	65.261	37.914	41.614	1.00	50.39	C
ATOM	9019	O	THR	E 483	65.722	38.227	42.715	1.00	51.42	O
ATOM	9020	CB	THR	E 483	63.104	36.723	41.224	1.00	49.12	C
ATOM	9021	OG1	THR	E 483	61.695	36.995	41.063	1.00	50.26	O
ATOM	9022	CG2	THR	E 483	63.398	35.939	42.479	1.00	48.46	C
ATOM	9023	N	ASP	E 484	66.058	37.432	40.643	1.00	50.79	N
ATOM	9024	CA	ASP	E 484	67.484	37.245	40.832	1.00	49.22	C
ATOM	9025	C	ASP	E 484	68.094	38.564	41.260	1.00	48.29	C
ATOM	9026	O	ASP	E 484	68.896	38.610	42.191	1.00	49.77	O
ATOM	9027	CB	ASP	E 484	68.170	36.726	39.587	1.00	50.22	C
ATOM	9028	CG	ASP	E 484	67.746	35.330	39.199	1.00	51.85	C
ATOM	9029	OD1	ASP	E 484	67.187	34.618	40.058	1.00	52.04	O
ATOM	9030	OD2	ASP	E 484	67.976	34.955	38.012	1.00	53.07	O
ATOM	9031	N	THR	E 485	67.724	39.671	40.648	1.00	47.30	N
ATOM	9032	CA	THR	E 485	68.307	40.957	41.023	1.00	48.09	C
ATOM	9033	C	THR	E 485	68.041	41.258	42.493	1.00	50.40	C
ATOM	9034	O	THR	E 485	68.888	41.782	43.230	1.00	50.86	O
ATOM	9035	CB	THR	E 485	67.688	42.030	40.127	1.00	46.75	C
ATOM	9036	OG1	THR	E 485	67.890	41.599	38.792	1.00	46.68	O
ATOM	9037	CG2	THR	E 485	68.324	43.380	40.335	1.00	46.98	C
ATOM	9038	N	LEU	E 486	66.818	40.925	42.940	1.00	50.66	N
ATOM	9039	CA	LEU	E 486	66.450	41.162	44.319	1.00	50.23	C
ATOM	9040	C	LEU	E 486	67.342	40.380	45.273	1.00	51.60	C
ATOM	9041	O	LEU	E 486	67.909	40.953	46.218	1.00	52.24	O
ATOM	9042	CB	LEU	E 486	64.991	40.763	44.550	1.00	47.97	C
ATOM	9043	CG	LEU	E 486	64.025	41.941	44.459	1.00	47.38	C
ATOM	9044	CD1	LEU	E 486	62.620	41.409	44.670	1.00	46.61	C
ATOM	9045	CD2	LEU	E 486	64.395	43.072	45.410	1.00	46.32	C
ATOM	9046	N	ILE	E 487	67.454	39.076	45.010	1.00	52.13	N
ATOM	9047	CA	ILE	E 487	68.281	38.236	45.869	1.00	53.81	C
ATOM	9048	C	ILE	E 487	69.715	38.753	45.883	1.00	55.54	C
ATOM	9049	O	ILE	E 487	70.364	38.863	46.912	1.00	55.11	O
ATOM	9050	CB	ILE	E 487	68.282	36.788	45.368	1.00	53.59	C

ATOM	9051	CG1 ILE E 487	66.926	36.139	45.542	1.00	54.66	C
ATOM	9052	CG2 ILE E 487	69.350	36.053	46.158	1.00	54.90	C
ATOM	9053	CD1 ILE E 487	66.571	35.671	46.947	1.00	54.57	C
ATOM	9054	N HIS E 488	70.208	39.076	44.685	1.00	57.51	N
ATOM	9055	CA HIS E 488	71.536	39.600	44.498	1.00	59.19	C
ATOM	9056	C HIS E 488	71.758	40.771	45.434	1.00	58.44	C
ATOM	9057	O HIS E 488	72.721	40.848	46.156	1.00	59.19	O
ATOM	9058	CB HIS E 488	71.717	40.106	43.063	1.00	62.63	C
ATOM	9059	CG HIS E 488	73.036	40.830	42.927	1.00	65.60	C
ATOM	9060	ND1 HIS E 488	74.266	40.202	42.973	1.00	65.93	N
ATOM	9061	CD2 HIS E 488	73.266	42.159	42.758	1.00	66.70	C
ATOM	9062	CE1 HIS E 488	75.191	41.132	42.833	1.00	67.14	C
ATOM	9063	NE2 HIS E 488	74.626	42.326	42.700	1.00	67.30	N
ATOM	9064	N LEU E 489	70.868	41.736	45.415	1.00	58.60	N
ATOM	9065	CA LEU E 489	70.937	42.893	46.283	1.00	58.55	C
ATOM	9066	C LEU E 489	71.048	42.490	47.748	1.00	59.43	C
ATOM	9067	O LEU E 489	71.873	42.998	48.510	1.00	59.10	O
ATOM	9068	CB LEU E 489	69.644	43.695	46.077	1.00	57.83	C
ATOM	9069	CG LEU E 489	69.663	44.585	44.843	1.00	58.62	C
ATOM	9070	CD1 LEU E 489	68.299	45.201	44.576	1.00	60.15	C
ATOM	9071	CD2 LEU E 489	70.650	45.711	45.010	1.00	58.53	C
ATOM	9072	N MET E 490	70.195	41.584	48.209	1.00	60.10	N
ATOM	9073	CA MET E 490	70.142	41.128	49.577	1.00	60.99	C
ATOM	9074	C MET E 490	71.391	40.422	50.071	1.00	62.23	C
ATOM	9075	O MET E 490	71.826	40.647	51.207	1.00	63.00	O
ATOM	9076	CB MET E 490	68.990	40.137	49.719	1.00	61.34	C
ATOM	9077	CG MET E 490	67.694	40.774	50.181	1.00	61.87	C
ATOM	9078	SD MET E 490	66.307	39.717	49.728	1.00	63.08	S
ATOM	9079	CE MET E 490	65.118	40.978	49.268	1.00	62.20	C
ATOM	9080	N ALA E 491	71.951	39.565	49.219	1.00	62.91	N
ATOM	9081	CA ALA E 491	73.194	38.855	49.539	1.00	62.51	C
ATOM	9082	C ALA E 491	74.254	39.938	49.677	1.00	62.28	C
ATOM	9083	O ALA E 491	74.922	40.033	50.688	1.00	61.88	O
ATOM	9084	CB ALA E 491	73.611	37.869	48.478	1.00	62.29	C
ATOM	9085	N LYS E 492	74.341	40.866	48.737	1.00	63.32	N
ATOM	9086	CA LYS E 492	75.298	41.962	48.838	1.00	64.87	C
ATOM	9087	C LYS E 492	75.113	42.683	50.157	1.00	65.81	C
ATOM	9088	O LYS E 492	76.105	43.172	50.703	1.00	67.31	O
ATOM	9089	CB LYS E 492	75.305	42.910	47.652	1.00	64.43	C
ATOM	9094	N ALA E 493	73.946	42.752	50.782	1.00	66.73	N
ATOM	9095	CA ALA E 493	73.796	43.411	52.075	1.00	67.59	C
ATOM	9096	C ALA E 493	74.145	42.386	53.151	1.00	68.71	C
ATOM	9097	O ALA E 493	74.046	42.594	54.363	1.00	70.36	O
ATOM	9098	CB ALA E 493	72.419	43.975	52.330	1.00	66.98	C
ATOM	9099	N GLY E 494	74.576	41.212	52.740	1.00	68.50	N

ATOM	9100	CA	GLY E 494	74.976	40.165	53.634	1.00	69.07	C
ATOM	9101	C	GLY E 494	73.828	39.656	54.471	1.00	69.47	C
ATOM	9102	O	GLY E 494	73.940	39.758	55.696	1.00	71.51	O
ATOM	9103	N	LEU E 495	72.759	39.132	53.892	1.00	68.77	N
ATOM	9104	CA	LEU E 495	71.727	38.575	54.753	1.00	68.21	C
ATOM	9105	C	LEU E 495	71.962	37.069	54.590	1.00	68.01	C
ATOM	9106	O	LEU E 495	72.323	36.712	53.485	1.00	67.93	O
ATOM	9107	CB	LEU E 495	70.290	38.840	54.370	1.00	68.32	C
ATOM	9108	CG	LEU E 495	69.832	40.249	54.044	1.00	68.34	C
ATOM	9109	CD1	LEU E 495	68.315	40.317	53.923	1.00	67.43	C
ATOM	9110	CD2	LEU E 495	70.332	41.245	55.061	1.00	68.97	C
ATOM	9111	N	THR E 496	71.758	36.258	55.596	1.00	68.75	N
ATOM	9112	CA	THR E 496	71.902	34.824	55.419	1.00	69.37	C
ATOM	9113	C	THR E 496	71.080	34.388	54.222	1.00	69.03	C
ATOM	9114	O	THR E 496	70.180	35.066	53.763	1.00	69.47	O
ATOM	9115	CB	THR E 496	71.233	34.131	56.618	1.00	70.11	C
ATOM	9116	OG1	THR E 496	71.873	34.700	57.756	1.00	71.45	O
ATOM	9117	CG2	THR E 496	71.371	32.630	56.616	1.00	71.74	C
ATOM	9118	N	LEU E 497	71.304	33.197	53.738	1.00	69.97	N
ATOM	9119	CA	LEU E 497	70.553	32.602	52.660	1.00	71.63	C
ATOM	9120	C	LEU E 497	69.095	32.446	53.106	1.00	72.13	C
ATOM	9121	O	LEU E 497	68.162	32.535	52.295	1.00	72.44	O
ATOM	9122	CB	LEU E 497	71.131	31.231	52.341	1.00	72.99	C
ATOM	9123	CG	LEU E 497	71.372	30.828	50.896	1.00	74.37	C
ATOM	9124	CD1	LEU E 497	70.685	29.475	50.704	1.00	75.32	C
ATOM	9125	CD2	LEU E 497	70.900	31.839	49.866	1.00	74.61	C
ATOM	9126	N	GLN E 498	68.897	32.211	54.406	1.00	72.01	N
ATOM	9127	CA	GLN E 498	67.549	32.060	54.934	1.00	71.97	C
ATOM	9128	C	GLN E 498	66.909	33.424	55.080	1.00	69.93	C
ATOM	9129	O	GLN E 498	65.739	33.561	54.778	1.00	70.36	O
ATOM	9130	CB	GLN E 498	67.502	31.299	56.251	1.00	74.47	C
ATOM	9131	CG	GLN E 498	66.283	31.647	57.073	1.00	77.68	C
ATOM	9132	CD	GLN E 498	66.044	30.785	58.280	1.00	79.79	C
ATOM	9133	OE1	GLN E 498	64.926	30.307	58.504	1.00	81.14	O
ATOM	9134	NE2	GLN E 498	67.100	30.595	59.063	1.00	81.05	N
ATOM	9135	N	GLN E 499	67.619	34.449	55.505	1.00	68.41	N
ATOM	9136	CA	GLN E 499	67.043	35.784	55.611	1.00	66.86	C
ATOM	9137	C	GLN E 499	66.679	36.282	54.214	1.00	66.40	C
ATOM	9138	O	GLN E 499	65.695	37.009	54.029	1.00	67.67	O
ATOM	9139	CB	GLN E 499	68.041	36.777	56.179	1.00	66.76	C
ATOM	9140	CG	GLN E 499	68.860	36.126	57.269	1.00	68.08	C
ATOM	9141	CD	GLN E 499	69.473	37.193	58.141	1.00	69.93	C
ATOM	9142	OE1	GLN E 499	70.351	37.923	57.683	1.00	71.62	O
ATOM	9143	NE2	GLN E 499	69.002	37.284	59.376	1.00	70.77	N
ATOM	9144	N	GLN E 500	67.500	35.889	53.236	1.00	63.75	N

ATOM	9145	CA	GLN E 500	67.226	36.271	51.869	1.00	61.30	C
ATOM	9146	C	GLN E 500	65.864	35.705	51.472	1.00	59.52	C
ATOM	9147	O	GLN E 500	64.999	36.518	51.111	1.00	59.50	O
ATOM	9148	CB	GLN E 500	68.304	35.728	50.970	1.00	62.53	C
ATOM	9149	CG	GLN E 500	69.567	36.574	50.669	1.00	63.94	C
ATOM	9150	CD	GLN E 500	70.657	35.694	50.265	1.00	64.75	C
ATOM	9151	OE1	GLN E 500	70.508	35.048	49.230	1.00	64.72	O
ATOM	9152	NE2	GLN E 500	71.778	35.663	50.965	1.00	66.02	N
ATOM	9153	N	HIS E 501	65.646	34.385	51.568	1.00	56.28	N
ATOM	9154	CA	HIS E 501	64.327	33.904	51.165	1.00	54.76	C
ATOM	9155	C	HIS E 501	63.212	34.489	52.015	1.00	54.80	C
ATOM	9156	O	HIS E 501	62.118	34.664	51.456	1.00	56.59	O
ATOM	9157	CB	HIS E 501	64.183	32.405	51.063	1.00	54.63	C
ATOM	9158	CG	AHIS E 501	64.301	31.550	52.271	0.50	53.86	C
ATOM	9159	CG	BHIS E 501	65.370	31.733	50.443	0.50	55.35	C
ATOM	9160	ND1A	HIS E 501	65.085	30.406	52.291	0.50	53.73	N
ATOM	9161	ND1B	HIS E 501	65.831	32.076	49.196	0.50	55.39	N
ATOM	9162	CD2A	HIS E 501	63.744	31.631	53.495	0.50	53.43	C
ATOM	9163	CD2B	HIS E 501	66.186	30.756	50.904	0.50	55.24	C
ATOM	9164	CE1A	HIS E 501	65.005	29.837	53.476	0.50	53.33	C
ATOM	9165	CE1B	HIS E 501	66.886	31.338	48.908	0.50	55.63	C
ATOM	9166	NE2A	HIS E 501	64.196	30.564	54.223	0.50	53.32	N
ATOM	9167	NE2B	HIS E 501	67.120	30.534	49.931	0.50	55.54	N
ATOM	9168	N	GLN E 502	63.388	34.815	53.283	1.00	52.93	N
ATOM	9169	CA	GLN E 502	62.318	35.390	54.078	1.00	51.36	C
ATOM	9170	C	GLN E 502	61.987	36.780	53.587	1.00	50.30	C
ATOM	9171	O	GLN E 502	60.831	37.091	53.311	1.00	49.64	O
ATOM	9172	CB	GLN E 502	62.717	35.357	55.551	1.00	52.69	C
ATOM	9173	CG	GLN E 502	62.955	33.916	55.981	1.00	54.06	C
ATOM	9174	CD	GLN E 502	62.980	33.648	57.462	1.00	54.41	C
ATOM	9175	OE1	GLN E 502	63.315	34.510	58.275	1.00	55.01	O
ATOM	9176	NE2	GLN E 502	62.628	32.406	57.783	1.00	54.39	N
ATOM	9177	N	ARG E 503	62.974	37.649	53.412	1.00	49.44	N
ATOM	9178	CA	ARG E 503	62.730	38.998	52.915	1.00	47.48	C
ATOM	9179	C	ARG E 503	62.002	38.993	51.577	1.00	47.83	C
ATOM	9180	O	ARG E 503	61.044	39.720	51.335	1.00	48.42	O
ATOM	9181	CB	ARG E 503	64.039	39.753	52.713	1.00	45.77	C
ATOM	9182	CG	ARG E 503	63.784	41.259	52.699	1.00	45.18	C
ATOM	9183	CD	ARG E 503	65.074	42.045	52.865	1.00	44.12	C
ATOM	9184	NE	ARG E 503	64.912	43.436	52.480	1.00	43.85	N
ATOM	9185	CZ	ARG E 503	64.532	44.405	53.307	1.00	44.09	C
ATOM	9186	NH1	ARG E 503	64.267	44.119	54.575	1.00	44.54	N
ATOM	9187	NH2	ARG E 503	64.415	45.652	52.881	1.00	43.20	N
ATOM	9188	N	LEU E 504	62.456	38.159	50.638	1.00	47.24	N
ATOM	9189	CA	LEU E 504	61.835	38.066	49.334	1.00	45.05	C

ATOM	9190	C	LEU E 504	60.352	37.857	49.583	1.00	45.79	C
ATOM	9191	O	LEU E 504	59.543	38.676	49.180	1.00	46.93	O
ATOM	9192	CB	LEU E 504	62.374	36.883	48.528	1.00	44.12	C
ATOM	9193	CG	LEU E 504	61.906	36.834	47.052	1.00	43.15	C
ATOM	9194	CD1	LEU E 504	62.211	38.115	46.310	1.00	40.31	C
ATOM	9195	CD2	LEU E 504	62.492	35.607	46.346	1.00	42.24	C
ATOM	9196	N	ALA E 505	59.997	36.764	50.267	1.00	45.92	N
ATOM	9197	CA	ALA E 505	58.588	36.467	50.546	1.00	44.68	C
ATOM	9198	C	ALA E 505	57.954	37.643	51.264	1.00	45.72	C
ATOM	9199	O	ALA E 505	56.879	38.075	50.843	1.00	46.80	O
ATOM	9200	CB	ALA E 505	58.506	35.155	51.275	1.00	42.98	C
ATOM	9201	N	GLN E 506	58.570	38.269	52.263	1.00	46.80	N
ATOM	9202	CA	GLN E 506	57.951	39.428	52.888	1.00	47.91	C
ATOM	9203	C	GLN E 506	57.684	40.527	51.870	1.00	47.86	C
ATOM	9204	O	GLN E 506	56.581	41.093	51.927	1.00	48.95	O
ATOM	9205	CB	GLN E 506	58.703	40.008	54.096	1.00	48.44	C
ATOM	9206	CG	AGLN E 506	59.512	39.010	54.875	0.50	49.73	C
ATOM	9207	CG	BGLN E 506	58.500	39.101	55.309	0.50	49.12	C
ATOM	9208	CD	AGLN E 506	60.135	39.435	56.173	0.50	50.74	C
ATOM	9209	CD	BGLN E 506	57.107	39.201	55.910	0.50	49.38	C
ATOM	9210	OE1	AGLN E 506	60.598	40.565	56.354	0.50	51.01	O
ATOM	9211	OE1	BGLN E 506	56.387	40.173	55.631	0.50	50.08	O
ATOM	9212	NE2	AGLN E 506	60.166	38.512	57.142	0.50	51.27	N
ATOM	9213	NE2	BGLN E 506	56.767	38.202	56.718	0.50	48.35	N
ATOM	9214	N	LEU E 507	58.619	40.840	50.987	1.00	47.88	N
ATOM	9215	CA	LEU E 507	58.411	41.898	50.004	1.00	47.29	C
ATOM	9216	C	LEU E 507	57.297	41.569	49.029	1.00	46.74	C
ATOM	9217	O	LEU E 507	56.400	42.402	48.888	1.00	48.55	O
ATOM	9218	CB	LEU E 507	59.675	42.200	49.213	1.00	47.73	C
ATOM	9219	CG	LEU E 507	60.799	42.819	50.041	1.00	48.47	C
ATOM	9220	CD1	LEU E 507	62.022	43.024	49.168	1.00	49.06	C
ATOM	9221	CD2	LEU E 507	60.305	44.111	50.662	1.00	48.94	C
ATOM	9222	N	LEU E 508	57.309	40.403	48.418	1.00	44.77	N
ATOM	9223	CA	LEU E 508	56.257	40.032	47.487	1.00	43.50	C
ATOM	9224	C	LEU E 508	54.900	39.916	48.149	1.00	43.05	C
ATOM	9225	O	LEU E 508	53.870	40.210	47.501	1.00	43.99	O
ATOM	9226	CB	LEU E 508	56.704	38.740	46.790	1.00	43.74	C
ATOM	9227	CG	LEU E 508	58.012	38.852	46.006	1.00	43.72	C
ATOM	9228	CD1	LEU E 508	58.428	37.544	45.359	1.00	44.33	C
ATOM	9229	CD2	LEU E 508	57.898	39.883	44.898	1.00	44.71	C
ATOM	9230	N	LEU E 509	54.777	39.536	49.426	1.00	40.90	N
ATOM	9231	CA	LEU E 509	53.441	39.460	50.002	1.00	40.09	C
ATOM	9232	C	LEU E 509	52.800	40.834	50.140	1.00	41.24	C
ATOM	9233	O	LEU E 509	51.557	40.916	50.154	1.00	41.02	O
ATOM	9234	CB	LEU E 509	53.373	38.664	51.291	1.00	39.84	C

ATOM	9235	CG LEU E 509	53.569	37.146	51.262	1.00	38.29	C
ATOM	9236	CD1 LEU E 509	53.680	36.631	52.684	1.00	38.59	C
ATOM	9237	CD2 LEU E 509	52.415	36.456	50.577	1.00	37.87	C
ATOM	9238	N ILE E 510	53.581	41.925	50.215	1.00	41.82	N
ATOM	9239	CA ILE E 510	53.036	43.279	50.289	1.00	41.48	C
ATOM	9240	C ILE E 510	52.322	43.586	48.965	1.00	40.98	C
ATOM	9241	O ILE E 510	51.288	44.255	48.879	1.00	40.39	O
ATOM	9242	CB ILE E 510	54.124	44.314	50.574	1.00	41.63	C
ATOM	9243	CG1 ILE E 510	54.402	44.397	52.065	1.00	44.13	C
ATOM	9244	CG2 ILE E 510	53.696	45.727	50.195	1.00	42.28	C
ATOM	9245	CD1 ILE E 510	55.852	44.493	52.484	1.00	45.11	C
ATOM	9246	N LEU E 511	52.830	43.046	47.863	1.00	39.71	N
ATOM	9247	CA LEU E 511	52.200	43.253	46.586	1.00	41.46	C
ATOM	9248	C LEU E 511	50.727	42.875	46.611	1.00	42.21	C
ATOM	9249	O LEU E 511	49.878	43.532	45.972	1.00	43.60	O
ATOM	9250	CB LEU E 511	52.979	42.555	45.489	1.00	42.42	C
ATOM	9251	CG LEU E 511	54.437	42.994	45.257	1.00	41.22	C
ATOM	9252	CD1 LEU E 511	54.902	42.441	43.915	1.00	40.61	C
ATOM	9253	CD2 LEU E 511	54.565	44.500	45.310	1.00	40.00	C
ATOM	9254	N SER E 512	50.327	41.849	47.330	1.00	42.05	N
ATOM	9255	CA SER E 512	48.927	41.490	47.441	1.00	41.67	C
ATOM	9256	C SER E 512	48.089	42.625	48.024	1.00	42.14	C
ATOM	9257	O SER E 512	47.007	42.923	47.503	1.00	43.27	O
ATOM	9258	CB SER E 512	48.845	40.347	48.457	1.00	42.20	C
ATOM	9259	OG SER E 512	47.955	39.450	47.822	1.00	44.51	O
ATOM	9260	N HIS E 513	48.561	43.245	49.122	1.00	40.15	N
ATOM	9261	CA HIS E 513	47.878	44.370	49.738	1.00	37.17	C
ATOM	9262	C HIS E 513	47.830	45.532	48.756	1.00	37.08	C
ATOM	9263	O HIS E 513	46.796	46.180	48.558	1.00	36.26	O
ATOM	9264	CB HIS E 513	48.536	44.758	51.048	1.00	36.99	C
ATOM	9265	CG AHIS E 513	48.384	43.574	51.977	0.50	38.16	C
ATOM	9266	CG BHIS E 513	47.730	45.724	51.874	0.50	36.98	C
ATOM	9267	ND1AHIS E 513	49.418	42.875	52.552	0.50	38.53	N
ATOM	9268	ND1BHIS E 513	48.272	46.844	52.474	0.50	36.86	N
ATOM	9269	CD2AHIS E 513	47.254	42.968	52.414	0.50	38.65	C
ATOM	9270	CD2BHIS E 513	46.414	45.738	52.230	0.50	36.50	C
ATOM	9271	CE1AHIS E 513	48.944	41.901	53.302	0.50	38.05	C
ATOM	9272	CE1BHIS E 513	47.333	47.492	53.145	0.50	36.22	C
ATOM	9273	NE2AHIS E 513	47.632	41.936	53.239	0.50	38.33	N
ATOM	9274	NE2BHIS E 513	46.196	46.841	53.014	0.50	35.91	N
ATOM	9275	N ILE E 514	48.925	45.796	48.044	1.00	36.49	N
ATOM	9276	CA ILE E 514	48.886	46.859	47.042	1.00	36.96	C
ATOM	9277	C ILE E 514	47.827	46.526	46.005	1.00	37.92	C
ATOM	9278	O ILE E 514	47.004	47.390	45.637	1.00	39.37	O
ATOM	9279	CB ILE E 514	50.283	47.088	46.492	1.00	36.89	C

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ATOM 9280	CG1 ILE E 514	51.113	47.776	47.589	1.00	37.32	C
ATOM 9281	CG2 ILE E 514	50.313	47.942	45.241	1.00	37.67	C
ATOM 9282	CD1 ILE E 514	52.581	47.466	47.388	1.00	37.88	C
ATOM 9283	N ARG E 515	47.694	45.302	45.512	1.00	37.89	N
ATOM 9284	CA ARG E 515	46.609	44.984	44.586	1.00	38.83	C
ATOM 9285	C ARG E 515	45.279	45.328	45.253	1.00	38.63	C
ATOM 9286	O ARG E 515	44.469	46.015	44.660	1.00	38.69	O
ATOM 9287	CB ARG E 515	46.533	43.494	44.247	1.00	40.80	C
ATOM 9288	CG ARG E 515	45.659	43.079	43.071	1.00	41.23	C
ATOM 9289	CD ARG E 515	46.126	43.865	41.872	1.00	43.88	C
ATOM 9290	NE ARG E 515	46.014	43.174	40.598	1.00	46.99	N
ATOM 9291	CZ ARG E 515	46.847	42.220	40.180	1.00	47.40	C
ATOM 9292	NH1 ARG E 515	47.826	41.856	41.003	1.00	48.35	N
ATOM 9293	NH2 ARG E 515	46.677	41.653	39.012	1.00	45.62	N
ATOM 9294	N HIS E 516	45.078	44.842	46.481	1.00	38.60	N
ATOM 9295	CA HIS E 516	43.865	45.076	47.233	1.00	37.95	C
ATOM 9296	C HIS E 516	43.486	46.538	47.298	1.00	37.62	C
ATOM 9297	O HIS E 516	42.386	46.930	46.953	1.00	35.87	O
ATOM 9298	CB HIS E 516	43.986	44.482	48.647	1.00	39.38	C
ATOM 9299	CG HIS E 516	42.666	44.664	49.370	1.00	40.60	C
ATOM 9300	ND1 HIS E 516	41.570	43.874	49.101	1.00	40.60	N
ATOM 9301	CD2 HIS E 516	42.275	45.563	50.309	1.00	40.17	C
ATOM 9302	CE1 HIS E 516	40.566	44.277	49.834	1.00	40.21	C
ATOM 9303	NE2 HIS E 516	40.962	45.301	50.582	1.00	40.01	N
ATOM 9304	N MET E 517	44.401	47.380	47.729	1.00	39.59	N
ATOM 9305	CA MET E 517	44.246	48.819	47.845	1.00	41.12	C
ATOM 9306	C MET E 517	43.868	49.510	46.546	1.00	40.72	C
ATOM 9307	O MET E 517	43.019	50.384	46.434	1.00	39.67	O
ATOM 9308	CB MET E 517	45.627	49.419	48.227	1.00	42.77	C
ATOM 9309	CG MET E 517	45.609	49.901	49.675	1.00	44.50	C
ATOM 9310	SD MET E 517	47.254	50.444	50.166	1.00	45.23	S
ATOM 9311	CE MET E 517	48.031	48.852	50.249	1.00	47.94	C
ATOM 9312	N SER E 518	44.586	49.097	45.500	1.00	40.89	N
ATOM 9313	CA SER E 518	44.329	49.660	44.180	1.00	42.58	C
ATOM 9314	C SER E 518	42.894	49.342	43.749	1.00	43.22	C
ATOM 9315	O SER E 518	42.223	50.166	43.117	1.00	42.43	O
ATOM 9316	CB SER E 518	45.377	49.137	43.220	1.00	43.38	C
ATOM 9317	OG SER E 518	44.899	48.924	41.907	1.00	45.06	O
ATOM 9318	N ASN E 519	42.415	48.136	44.080	1.00	43.91	N
ATOM 9319	CA ASN E 519	41.076	47.702	43.728	1.00	44.34	C
ATOM 9320	C ASN E 519	40.113	48.632	44.431	1.00	45.64	C
ATOM 9321	O ASN E 519	39.262	49.200	43.746	1.00	47.72	O
ATOM 9322	CB ASN E 519	40.827	46.251	44.066	1.00	45.00	C
ATOM 9323	CG ASN E 519	41.376	45.314	43.021	1.00	46.96	C
ATOM 9324	OD1 ASN E 519	41.448	45.669	41.831	1.00	49.57	O

ATOM	9325	ND2 ASN E 519	41.782	44.115	43.392	1.00	46.73	N
ATOM	9326	N LYS E 520	40.259	48.867	45.721	1.00	45.70	N
ATOM	9327	CA LYS E 520	39.382	49.814	46.402	1.00	46.05	C
ATOM	9328	C LYS E 520	39.572	51.228	45.860	1.00	45.58	C
ATOM	9329	O LYS E 520	38.594	51.950	45.722	1.00	45.26	O
ATOM	9330	CB LYS E 520	39.722	49.816	47.888	1.00	48.01	C
ATOM	9331	CG LYS E 520	40.001	48.371	48.311	1.00	50.52	C
ATOM	9332	CD LYS E 520	38.723	47.900	48.965	1.00	54.26	C
ATOM	9333	CE LYS E 520	38.044	46.761	48.220	1.00	56.67	C
ATOM	9334	NZ LYS E 520	36.608	46.682	48.688	1.00	58.30	N
ATOM	9335	N GLY E 521	40.808	51.632	45.554	1.00	44.85	N
ATOM	9336	CA GLY E 521	41.030	52.952	45.003	1.00	45.03	C
ATOM	9337	C GLY E 521	40.250	53.175	43.705	1.00	45.77	C
ATOM	9338	O GLY E 521	39.647	54.264	43.636	1.00	45.70	O
ATOM	9339	N MET E 522	40.225	52.273	42.702	1.00	45.27	N
ATOM	9340	CA MET E 522	39.478	52.571	41.511	1.00	45.39	C
ATOM	9341	C MET E 522	37.991	52.603	41.872	1.00	47.59	C
ATOM	9342	O MET E 522	37.272	53.433	41.349	1.00	48.56	O
ATOM	9343	CB MET E 522	39.441	51.667	40.334	1.00	45.90	C
ATOM	9344	CG MET E 522	40.441	50.747	39.785	1.00	47.11	C
ATOM	9345	SD MET E 522	41.710	51.489	38.776	1.00	48.25	S
ATOM	9346	CE MET E 522	40.843	52.867	38.058	1.00	46.66	C
ATOM	9347	N GLU E 523	37.544	51.681	42.724	1.00	49.63	N
ATOM	9348	CA GLU E 523	36.130	51.710	43.074	1.00	50.27	C
ATOM	9349	C GLU E 523	35.820	53.102	43.575	1.00	47.33	C
ATOM	9350	O GLU E 523	34.871	53.689	43.113	1.00	48.01	O
ATOM	9351	CB GLU E 523	35.797	50.628	44.069	1.00	56.25	C
ATOM	9352	CG GLU E 523	35.392	49.313	43.452	1.00	63.89	C
ATOM	9353	CD GLU E 523	34.322	49.449	42.383	1.00	69.24	C
ATOM	9354	OE1 GLU E 523	33.579	50.482	42.394	1.00	72.11	O
ATOM	9355	OE2 GLU E 523	34.219	48.511	41.541	1.00	71.58	O
ATOM	9356	N HIS E 524	36.596	53.689	44.450	1.00	44.84	N
ATOM	9357	CA HIS E 524	36.385	55.020	44.954	1.00	44.01	C
ATOM	9358	C HIS E 524	36.495	56.118	43.922	1.00	44.99	C
ATOM	9359	O HIS E 524	35.654	57.015	43.827	1.00	43.85	O
ATOM	9360	CB HIS E 524	37.437	55.270	46.046	1.00	43.01	C
ATOM	9361	CG HIS E 524	37.353	56.633	46.640	1.00	42.25	C
ATOM	9362	ND1 HIS E 524	38.045	57.704	46.130	1.00	43.08	N
ATOM	9363	CD2 HIS E 524	36.678	57.129	47.680	1.00	42.58	C
ATOM	9364	CE1 HIS E 524	37.801	58.793	46.823	1.00	43.17	C
ATOM	9365	NE2 HIS E 524	36.960	58.463	47.792	1.00	42.97	N
ATOM	9366	N LEU E 525	37.559	56.112	43.109	1.00	46.94	N
ATOM	9367	CA LEU E 525	37.779	57.153	42.110	1.00	49.17	C
ATOM	9368	C LEU E 525	36.580	57.212	41.165	1.00	52.01	C
ATOM	9369	O LEU E 525	36.148	58.223	40.631	1.00	52.24	O

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ATOM 9370 CB LEU E 525	39.053 56.962 41.285 1.00 47.90	C
ATOM 9371 CG LEU E 525	39.244 57.990 40.152 1.00 47.53	C
ATOM 9372 CD1 LEU E 525	39.392 59.404 40.705 1.00 46.42	C
ATOM 9373 CD2 LEU E 525	40.466 57.642 39.309 1.00 47.02	C
ATOM 9374 N TYR E 526	36.027 56.036 40.932 1.00 54.88	N
ATOM 9375 CA TYR E 526	34.879 55.815 40.110 1.00 57.69	C
ATOM 9376 C TYR E 526	33.668 56.436 40.753 1.00 58.58	C
ATOM 9377 O TYR E 526	33.007 57.177 40.044 1.00 59.66	O
ATOM 9378 CB TYR E 526	34.705 54.305 39.983 1.00 61.41	C
ATOM 9379 CG TYR E 526	33.568 54.083 39.025 1.00 65.14	C
ATOM 9380 CD1 TYR E 526	33.756 54.187 37.665 1.00 67.03	C
ATOM 9381 CD2 TYR E 526	32.314 53.796 39.523 1.00 67.68	C
ATOM 9382 CE1 TYR E 526	32.715 53.993 36.783 1.00 69.48	C
ATOM 9383 CE2 TYR E 526	31.244 53.597 38.661 1.00 70.50	C
ATOM 9384 CZ TYR E 526	31.472 53.700 37.297 1.00 71.37	C
ATOM 9385 OH TYR E 526	30.419 53.500 36.424 1.00 74.24	O
ATOM 9386 N SER E 527	33.368 56.200 42.023 1.00 59.95	N
ATOM 9387 CA SER E 527	32.185 56.873 42.594 1.00 60.59	C
ATOM 9388 C SER E 527	32.496 58.352 42.632 1.00 60.32	C
ATOM 9389 O SER E 527	31.682 59.068 42.087 1.00 60.64	O
ATOM 9390 CB SER E 527	31.787 56.326 43.942 1.00 61.48	C
ATOM 9391 OG SER E 527	32.971 56.159 44.693 1.00 63.66	O
ATOM 9392 N MET E 528	33.635 58.830 43.085 1.00 61.55	N
ATOM 9393 CA MET E 528	33.962 60.251 43.019 1.00 63.18	C
ATOM 9394 C MET E 528	33.613 60.808 41.638 1.00 63.81	C
ATOM 9395 O MET E 528	33.072 61.904 41.516 1.00 62.67	O
ATOM 9396 CB MET E 528	35.446 60.503 43.320 1.00 63.23	C
ATOM 9397 CG MET E 528	35.842 60.654 44.760 1.00 63.15	C
ATOM 9398 SD MET E 528	34.524 61.273 45.838 1.00 63.53	S
ATOM 9399 CE MET E 528	33.821 59.780 46.493 1.00 63.39	C
ATOM 9400 N LYS E 529	33.910 60.094 40.563 1.00 66.12	N
ATOM 9401 CA LYS E 529	33.596 60.552 39.219 1.00 69.80	C
ATOM 9402 C LYS E 529	32.094 60.584 38.977 1.00 72.14	C
ATOM 9403 O LYS E 529	31.573 61.501 38.345 1.00 72.53	O
ATOM 9404 CB LYS E 529	34.291 59.668 38.198 1.00 70.24	C
ATOM 9405 CG LYS E 529	33.485 59.235 37.018 1.00 72.19	C
ATOM 9406 CD LYS E 529	34.250 59.378 35.727 1.00 74.77	C
ATOM 9407 CE LYS E 529	33.472 58.788 34.553 1.00 77.53	C
ATOM 9408 NZ LYS E 529	32.820 57.464 34.846 1.00 79.64	N
ATOM 9409 N CYSE 530	31.359 59.587 39.447 1.00 74.83	N
ATOM 9410 CA CYSE 530	29.915 59.533 39.271 1.00 77.63	C
ATOM 9411 C CYSE 530	29.242 60.633 40.043 1.00 79.62	C
ATOM 9412 O CYSE 530	28.296 61.273 39.583 1.00 81.02	O
ATOM 9413 CB CYSE 530	29.449 58.116 39.601 1.00 78.63	C
ATOM 9414 SG ACYSE 530	30.128 56.929 38.389 0.50 80.31	S

ATOM	9415	SG BCYS E 530	28.141	57.575	38.467	0.50	79.92	S
ATOM	9416	N LYS E 531	29.719	61.034	41.209	1.00	81.60	N
ATOM	9417	CA LYS E 531	29.214	62.129	42.002	1.00	83.48	C
ATOM	9418	C LYS E 531	29.595	63.461	41.359	1.00	84.84	C
ATOM	9419	O LYS E 531	29.278	64.547	41.844	1.00	85.98	O
ATOM	9420	CB LYS E 531	29.842	62.116	43.398	1.00	84.16	C
ATOM	9421	CG LYS E 531	29.174	61.255	44.438	1.00	85.42	C
ATOM	9422	CD LYS E 531	28.963	59.818	43.955	1.00	86.01	C
ATOM	9425	N ASNE 532	30.319	63.462	40.270	1.00	86.16	N
ATOM	9426	CA ASNE 532	30.755	64.643	39.563	1.00	87.97	C
ATOM	9427	C ASNE 532	31.574	65.543	40.461	1.00	86.77	C
ATOM	9428	O ASNE 532	31.222	66.693	40.662	1.00	88.13	O
ATOM	9429	CB ASNE 532	29.554	65.398	38.999	1.00	91.01	C
ATOM	9430	CG ASNE 532	28.912	64.605	37.876	1.00	94.27	C
ATOM	9431	OD1 ASNE 532	29.637	64.076	37.022	1.00	95.71	O
ATOM	9432	ND2 ASNE 532	27.576	64.537	37.908	1.00	95.97	N
ATOM	9433	N VAL E 533	32.655	65.054	41.021	1.00	85.06	N
ATOM	9434	CA VAL E 533	33.541	65.790	41.909	1.00	83.95	C
ATOM	9435	C VAL E 533	34.955	65.844	41.319	1.00	83.81	C
ATOM	9436	O VAL E 533	35.866	66.622	41.603	1.00	84.30	O
ATOM	9437	CB VAL E 533	33.629	65.021	43.246	1.00	83.54	C
ATOM	9438	CG1 VAL E 533	34.400	65.798	44.283	1.00	83.03	C
ATOM	9439	CG2 VAL E 533	32.267	64.604	43.766	1.00	83.52	C
ATOM	9440	N VAL E 534	35.204	64.903	40.422	1.00	82.89	N
ATOM	9441	CA VAL E 534	36.458	64.700	39.731	1.00	82.04	C
ATOM	9442	C VAL E 534	36.409	65.422	38.391	1.00	81.13	C
ATOM	9443	O VAL E 534	35.475	65.259	37.609	1.00	80.09	O
ATOM	9444	CB VAL E 534	36.672	63.185	39.430	1.00	82.66	C
ATOM	9445	CG1 VAL E 534	37.826	62.837	38.501	1.00	81.66	C
ATOM	9446	CG2 VAL E 534	36.855	62.411	40.735	1.00	83.03	C
ATOM	9447	N PRO E 535	37.456	66.179	38.152	1.00	80.63	N
ATOM	9448	CA PRO E 535	37.652	66.898	36.924	1.00	81.29	C
ATOM	9449	C PRO E 535	37.861	65.887	35.797	1.00	82.66	C
ATOM	9450	O PRO E 535	38.163	64.695	35.919	1.00	82.39	O
ATOM	9451	CB PRO E 535	38.890	67.799	37.083	1.00	80.65	C
ATOM	9452	CG PRO E 535	39.350	67.541	38.473	1.00	79.86	C
ATOM	9453	CD PRO E 535	38.586	66.375	39.054	1.00	80.52	C
ATOM	9454	N LEU E 536	37.723	66.431	34.588	1.00	84.27	N
ATOM	9455	CA LEU E 536	37.837	65.722	33.337	1.00	84.25	C
ATOM	9456	C LEU E 536	39.244	65.558	32.805	1.00	83.95	C
ATOM	9457	O LEU E 536	39.442	65.872	31.616	1.00	85.68	O
ATOM	9462	N TYR E 537	40.179	65.068	33.627	1.00	81.54	N
ATOM	9463	CA TYR E 537	41.537	64.848	33.115	1.00	78.07	C
ATOM	9464	C TYR E 537	41.430	63.607	32.237	1.00	75.64	C
ATOM	9465	O TYR E 537	40.988	62.554	32.656	1.00	74.94	O

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ATOM	9466	CB TYR E 537	42.546	64.643	34.209	1.00	78.64	C
ATOM	9467	CG TYR E 537	42.632	65.800	35.170	1.00	79.58	C
ATOM	9468	CD1 TYR E 537	43.013	67.051	34.709	1.00	80.49	C
ATOM	9469	CD2 TYR E 537	42.351	65.663	36.519	1.00	80.09	C
ATOM	9470	CE1 TYR E 537	43.116	68.144	35.552	1.00	81.07	C
ATOM	9471	CE2 TYR E 537	42.454	66.753	37.360	1.00	80.95	C
ATOM	9472	CZ TYR E 537	42.832	67.985	36.889	1.00	81.19	C
ATOM	9473	OH TYR E 537	42.929	69.072	37.724	1.00	81.64	O
ATOM	9474	N ASP E 538	41.806	63.756	30.993	1.00	74.06	N
ATOM	9475	CA ASP E 538	41.779	62.755	29.962	1.00	71.59	C
ATOM	9476	C ASP E 538	42.579	61.491	30.122	1.00	66.82	C
ATOM	9477	O ASP E 538	42.006	60.415	29.898	1.00	66.54	O
ATOM	9478	CB ASP E 538	42.253	63.454	28.676	1.00	76.66	C
ATOM	9479	CG ASP E 538	41.014	64.042	28.001	1.00	81.43	C
ATOM	9480	OD1 ASP E 538	39.921	63.419	28.143	1.00	83.91	O
ATOM	9481	OD2 ASP E 538	41.166	65.103	27.346	1.00	83.58	O
ATOM	9482	N LEU E 539	43.853	61.597	30.478	1.00	61.38	N
ATOM	9483	CA LEU E 539	44.687	60.399	30.661	1.00	56.30	C
ATOM	9484	C LEU E 539	44.230	59.601	31.871	1.00	54.68	C
ATOM	9485	O LEU E 539	44.237	58.364	31.807	1.00	55.67	O
ATOM	9486	CB LEU E 539	46.142	60.770	30.696	1.00	54.20	C
ATOM	9487	CG LEU E 539	47.249	59.735	30.635	1.00	52.62	C
ATOM	9488	CD1 LEU E 539	46.963	58.705	29.562	1.00	52.94	C
ATOM	9489	CD2 LEU E 539	48.621	60.349	30.452	1.00	50.14	C
ATOM	9490	N LEU E 540	43.798	60.248	32.930	1.00	51.99	N
ATOM	9491	CA LEU E 540	43.270	59.601	34.106	1.00	50.81	C
ATOM	9492	C LEU E 540	41.937	58.937	33.789	1.00	50.97	C
ATOM	9493	O LEU E 540	41.713	57.787	34.184	1.00	50.47	O
ATOM	9494	CB LEU E 540	43.095	60.597	35.247	1.00	49.70	C
ATOM	9495	CG LEU E 540	42.671	60.046	36.604	1.00	48.68	C
ATOM	9496	CD1 LEU E 540	43.802	59.331	37.316	1.00	48.31	C
ATOM	9497	CD2 LEU E 540	42.141	61.157	37.474	1.00	48.00	C
ATOM	9498	N LEU E 541	41.048	59.559	33.017	1.00	52.48	N
ATOM	9499	CA LEU E 541	39.777	58.883	32.703	1.00	54.88	C
ATOM	9500	C LEU E 541	40.023	57.666	31.827	1.00	54.61	C
ATOM	9501	O LEU E 541	39.339	56.630	31.926	1.00	55.35	O
ATOM	9502	CB LEU E 541	38.676	59.825	32.213	1.00	56.64	C
ATOM	9503	CG LEU E 541	38.455	60.940	33.264	1.00	59.03	C
ATOM	9504	CD1 LEU E 541	37.500	62.006	32.784	1.00	60.04	C
ATOM	9505	CD2 LEU E 541	38.050	60.387	34.631	1.00	60.05	C
ATOM	9506	N GLU E 542	41.044	57.778	30.991	1.00	53.17	N
ATOM	9507	CA GLU E 542	41.409	56.667	30.133	1.00	52.63	C
ATOM	9508	C GLU E 542	41.824	55.485	30.982	1.00	51.67	C
ATOM	9509	O GLU E 542	41.235	54.426	30.804	1.00	53.18	O
ATOM	9510	CB GLU E 542	42.545	57.107	29.237	1.00	53.98	C

ATOM	9511	CG	GLU E 542	42.968	56.080	28.183	1.00	55.43	C
ATOM	9512	CD	GLU E 542	44.007	56.740	27.278	1.00	56.20	C
ATOM	9513	OE1	GLU E 542	43.863	57.973	27.045	1.00	56.53	O
ATOM	9514	OE2	GLU E 542	44.915	56.000	26.861	1.00	56.06	O
ATOM	9515	N	MET E 543	42.772	55.618	31.884	1.00	50.13	N
ATOM	9516	CA	MET E 543	43.183	54.486	32.707	1.00	50.01	C
ATOM	9517	C	MET E 543	42.037	53.999	33.574	1.00	50.73	C
ATOM	9518	O	MET E 543	41.896	52.801	33.859	1.00	51.88	O
ATOM	9519	CB	MET E 543	44.387	54.921	33.546	1.00	50.17	C
ATOM	9520	CG	MET E 543	45.472	55.536	32.658	1.00	50.14	C
ATOM	9521	SD	MET E 543	46.371	54.190	31.854	1.00	49.83	S
ATOM	9522	CE	MET E 543	46.038	54.596	30.144	1.00	51.73	C
ATOM	9523	N	LEU E 544	41.169	54.898	34.041	1.00	50.39	N
ATOM	9524	CA	LEU E 544	40.056	54.453	34.866	1.00	51.08	C
ATOM	9525	C	LEU E 544	39.119	53.599	34.022	1.00	52.64	C
ATOM	9526	O	LEU E 544	38.687	52.545	34.503	1.00	51.89	O
ATOM	9527	CB	LEU E 544	39.336	55.621	35.501	1.00	49.82	C
ATOM	9528	CG	LEU E 544	38.032	55.374	36.237	1.00	49.45	C
ATOM	9529	CD1	LEU E 544	38.119	54.490	37.461	1.00	48.18	C
ATOM	9530	CD2	LEU E 544	37.470	56.718	36.684	1.00	50.84	C
ATOM	9531	N	ASP E 545	38.832	54.032	32.797	1.00	55.61	N
ATOM	9532	CA	ASP E 545	37.941	53.268	31.941	1.00	59.73	C
ATOM	9533	C	ASP E 545	38.457	51.892	31.603	1.00	59.61	C
ATOM	9534	O	ASP E 545	37.635	50.985	31.534	1.00	60.30	O
ATOM	9535	CB	ASP E 545	37.564	53.923	30.628	1.00	64.39	C
ATOM	9536	CG	ASP E 545	36.754	55.196	30.851	1.00	69.96	C
ATOM	9537	OD1	ASP E 545	36.217	55.451	31.975	1.00	71.84	O
ATOM	9538	OD2	ASP E 545	36.660	55.974	29.843	1.00	72.34	O
ATOM	9539	N	ALA E 546	39.748	51.701	31.435	1.00	60.47	N
ATOM	9540	CA	ALA E 546	40.297	50.385	31.144	1.00	61.70	C
ATOM	9541	C	ALA E 546	39.737	49.355	32.115	1.00	63.42	C
ATOM	9542	O	ALA E 546	39.329	48.283	31.712	1.00	63.79	O
ATOM	9543	CB	ALA E 546	41.803	50.399	31.291	1.00	61.61	C
ATOM	9544	N	HIS E 547	39.719	49.673	33.392	1.00	66.30	N
ATOM	9545	CA	HIS E 547	39.225	48.863	34.455	1.00	69.24	C
ATOM	9546	C	HIS E 547	37.740	48.630	34.433	1.00	73.60	C
ATOM	9547	O	HIS E 547	37.308	47.495	34.626	1.00	75.89	O
ATOM	9548	CB	HIS E 547	39.532	49.620	35.773	1.00	67.78	C
ATOM	9549	CG	HIS E 547	40.989	49.285	35.946	1.00	66.33	C
ATOM	9550	ND1	HIS E 547	41.415	48.311	36.802	1.00	66.23	N
ATOM	9551	CD2	HIS E 547	42.059	49.802	35.319	1.00	65.84	C
ATOM	9552	CE1	HIS E 547	42.729	48.249	36.709	1.00	66.64	C
ATOM	9553	NE2	HIS E 547	43.144	49.133	35.819	1.00	66.16	N
ATOM	9554	N	ARG E 548	36.961	49.670	34.230	1.00	78.65	N
ATOM	9555	CA	ARG E 548	35.501	49.450	34.225	1.00	83.82	C

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ATOM 9556 C ARG E 548	35.112 48.563 33.055 1.00 84.39	C
ATOM 9557 O ARG E 548	35.981 48.291 32.186 1.00 85.01	O
ATOM 9558 CB ARG E 548	34.801 50.810 34.241 1.00 87.54	C
ATOM 9559 CG ARG E 548	35.485 51.952 34.980 1.00 90.41	C
ATOM 9560 CD ARG E 548	35.811 51.738 36.443 1.00 93.01	C
ATOM 9561 NE ARG E 548	35.074 50.727 37.193 1.00 95.25	N
ATOM 9562 CZ ARG E 548	35.442 50.146 38.337 1.00 96.28	C
ATOM 9563 NH1 ARG E 548	36.575 50.450 38.957 1.00 96.79	N
ATOM 9564 NH2 ARG E 548	34.660 49.227 38.903 1.00 96.67	N
TER 9565 ARG E 548		
HETATM 9566 C1 EST E 600	47.222 60.396 43.519 1.00 34.93	C
HETATM 9567 C2 EST E 600	48.571 60.475 43.210 1.00 37.57	C
HETATM 9568 C3 EST E 600	49.436 59.518 43.657 1.00 38.54	C
HETATM 9569 O3 EST E 600	50.769 59.635 43.327 1.00 40.09	O
HETATM 9570 C4 EST E 600	49.033 58.426 44.443 1.00 37.89	C
HETATM 9571 C5 EST E 600	47.646 58.348 44.751 1.00 36.69	C
HETATM 9572 C6 EST E 600	47.269 57.351 45.831 1.00 35.65	C
HETATM 9573 C7 EST E 600	45.832 57.501 46.268 1.00 34.45	C
HETATM 9574 C8 EST E 600	44.938 57.875 45.104 1.00 33.71	C
HETATM 9575 C9 EST E 600	45.317 59.266 44.607 1.00 33.78	C
HETATM 9576 C10 EST E 600	46.767 59.326 44.285 1.00 34.61	C
HETATM 9577 C11 EST E 600	44.458 59.764 43.457 1.00 34.19	C
HETATM 9578 C12 EST E 600	42.980 59.847 43.918 1.00 34.32	C
HETATM 9579 C13 EST E 600	42.578 58.437 44.347 1.00 34.56	C
HETATM 9580 C14 EST E 600	43.497 57.937 45.481 1.00 33.91	C
HETATM 9581 C15 EST E 600	42.765 56.634 45.805 1.00 34.14	C
HETATM 9582 C16 EST E 600	41.360 57.256 46.117 1.00 35.36	C
HETATM 9583 C17 EST E 600	41.236 58.366 45.073 1.00 35.02	C
HETATM 9584 O17 EST E 600	40.085 58.239 44.257 1.00 35.45	O
HETATM 9585 C18 EST E 600	42.511 57.536 43.119 1.00 34.18	C
ATOM 9586 N SER F 305	54.849 29.184 70.902 1.00 88.75	N
ATOM 9587 CA SER F 305	53.873 28.738 69.869 1.00 88.59	C
ATOM 9588 C SER F 305	54.304 27.466 69.171 1.00 87.91	C
ATOM 9589 O SER F 305	55.423 27.412 68.680 1.00 87.92	O
ATOM 9590 CB SER F 305	53.698 29.871 68.839 1.00 88.47	C
ATOM 9591 OG SER F 305	52.794 29.522 67.815 1.00 88.14	O
ATOM 9592 N LEU F 306	53.428 26.475 69.068 1.00 87.84	N
ATOM 9593 CA LEU F 306	53.764 25.236 68.354 1.00 87.46	C
ATOM 9594 C LEU F 306	54.314 25.700 67.008 1.00 86.18	C
ATOM 9595 O LEU F 306	55.444 25.390 66.663 1.00 86.66	O
ATOM 9596 CB LEU F 306	52.565 24.313 68.117 1.00 88.10	C
ATOM 9600 N ALA F 307	53.519 26.485 66.291 1.00 84.32	N
ATOM 9601 CA ALA F 307	53.906 27.037 65.014 1.00 82.77	C
ATOM 9602 C ALA F 307	55.411 27.233 64.958 1.00 81.44	C
ATOM 9603 O ALA F 307	56.089 26.580 64.173 1.00 81.34	O

ATOM 9604 CB ALA F 307	53.245 28.399 64.801 1.00 83.53	C
ATOM 9605 N LEU F 308	55.926 28.106 65.806 1.00 80.43	N
ATOM 9606 CA LEU F 308	57.349 28.379 65.823 1.00 80.87	C
ATOM 9607 C LEU F 308	58.283 27.248 66.188 1.00 81.37	C
ATOM 9608 O LEU F 308	59.508 27.460 66.133 1.00 82.73	O
ATOM 9609 CB LEU F 308	57.544 29.609 66.728 1.00 80.50	C
ATOM 9610 CG LEU F 308	56.845 30.879 66.264 1.00 80.59	C
ATOM 9611 CD1 LEU F 308	57.464 32.127 66.851 1.00 80.80	C
ATOM 9612 CD2 LEU F 308	56.724 31.006 64.767 1.00 80.59	C
ATOM 9613 N SER F 309	57.876 26.051 66.547 1.00 80.72	N
ATOM 9614 CA SER F 309	58.715 24.939 66.908 1.00 79.92	C
ATOM 9615 C SER F 309	58.728 23.803 65.907 1.00 78.75	C
ATOM 9616 O SER F 309	59.710 23.065 65.797 1.00 79.53	O
ATOM 9617 CB SER F 309	58.114 24.299 68.174 1.00 81.24	C
ATOM 9618 OG SER F 309	57.899 25.422 69.018 1.00 85.04	O
ATOM 9619 N LEU F 310	57.616 23.617 65.203 1.00 76.56	N
ATOM 9620 CA LEU F 310	57.582 22.522 64.249 1.00 73.92	C
ATOM 9621 C LEU F 310	58.688 22.705 63.220 1.00 72.56	C
ATOM 9622 O LEU F 310	59.173 23.788 62.966 1.00 72.40	O
ATOM 9623 CB LEU F 310	56.234 22.376 63.594 1.00 73.55	C
ATOM 9624 CG LEU F 310	55.028 22.755 64.432 1.00 72.82	C
ATOM 9625 CD1 LEU F 310	54.354 23.914 63.716 1.00 73.19	C
ATOM 9626 CD2 LEU F 310	54.108 21.571 64.611 1.00 73.65	C
ATOM 9627 N THR F 311	59.062 21.572 62.657 1.00 71.49	N
ATOM 9628 CA THR F 311	60.116 21.538 61.647 1.00 71.01	C
ATOM 9629 C THR F 311	59.429 21.644 60.311 1.00 70.16	C
ATOM 9630 O THR F 311	58.259 21.238 60.276 1.00 70.11	O
ATOM 9631 CB THR F 311	60.900 20.230 61.811 1.00 71.14	C
ATOM 9632 OG1 THR F 311	60.069 19.092 61.584 1.00 70.69	O
ATOM 9633 CG2 THR F 311	61.389 20.113 63.250 1.00 71.71	C
ATOM 9634 N ALA F 312	60.075 22.076 59.241 1.00 69.23	N
ATOM 9635 CA ALA F 312	59.383 22.153 57.967 1.00 69.06	C
ATOM 9636 C ALA F 312	58.565 20.893 57.733 1.00 69.29	C
ATOM 9637 O ALA F 312	57.430 20.985 57.256 1.00 69.18	O
ATOM 9638 CB ALA F 312	60.315 22.432 56.817 1.00 69.25	C
ATOM 9639 N ASP F 313	59.097 19.728 58.054 1.00 70.53	N
ATOM 9640 CA ASP F 313	58.342 18.498 57.862 1.00 72.19	C
ATOM 9641 C ASP F 313	57.094 18.407 58.701 1.00 70.29	C
ATOM 9642 O ASP F 313	56.062 18.015 58.167 1.00 69.40	O
ATOM 9643 CB ASP F 313	59.258 17.290 58.105 1.00 76.57	C
ATOM 9644 CG ASP F 313	60.094 17.159 56.828 1.00 80.64	C
ATOM 9645 OD1 ASP F 313	59.456 17.019 55.745 1.00 82.23	O
ATOM 9646 OD2 ASP F 313	61.339 17.234 56.980 1.00 82.58	O
ATOM 9647 N GLN F 314	57.138 18.766 59.970 1.00 69.39	N
ATOM 9648 CA GLN F 314	55.944 18.701 60.805 1.00 69.22	C

ATOM 9649 C GLN F 314	54.905 19.690 60.302 1.00 67.92	C
ATOM 9650 O GLN F 314	53.729 19.336 60.213 1.00 69.40	O
ATOM 9651 CB GLN F 314	56.253 19.013 62.257 1.00 71.08	C
ATOM 9652 CG GLN F 314	57.614 18.489 62.652 1.00 73.65	C
ATOM 9653 CD GLN F 314	57.910 18.637 64.123 1.00 74.97	C
ATOM 9654 OE1 GLN F 314	58.731 19.424 64.584 1.00 75.95	O
ATOM 9655 NE2 GLN F 314	57.186 17.823 64.872 1.00 75.84	N
ATOM 9656 N MET F 315	55.353 20.897 59.973 1.00 64.96	N
ATOM 9657 CA MET F 315	54.502 21.941 59.425 1.00 61.27	C
ATOM 9658 C MET F 315	53.678 21.403 58.258 1.00 58.97	C
ATOM 9659 O MET F 315	52.448 21.404 58.231 1.00 57.01	O
ATOM 9660 CB MET F 315	55.401 23.091 58.981 1.00 60.92	C
ATOM 9661 CG MET F 315	54.682 24.333 58.488 1.00 62.02	C
ATOM 9662 SD MET F 315	54.103 25.441 59.813 1.00 62.12	S
ATOM 9663 CE MET F 315	52.346 25.314 59.454 1.00 62.35	C
ATOM 9664 N VAL F 316	54.356 20.876 57.250 1.00 57.92	N
ATOM 9665 CA VAL F 316	53.706 20.343 56.073 1.00 57.96	C
ATOM 9666 C VAL F 316	52.653 19.315 56.416 1.00 59.23	C
ATOM 9667 O VAL F 316	51.565 19.318 55.845 1.00 60.06	O
ATOM 9668 CB VAL F 316	54.669 19.672 55.080 1.00 57.68	C
ATOM 9669 CG1 VAL F 316	53.927 18.999 53.931 1.00 57.36	C
ATOM 9670 CG2 VAL F 316	55.668 20.678 54.539 1.00 57.58	C
ATOM 9671 N SER F 317	52.978 18.386 57.304 1.00 60.61	N
ATOM 9672 CA SER F 317	52.015 17.324 57.652 1.00 61.23	C
ATOM 9673 C SER F 317	50.846 17.891 58.423 1.00 59.70	C
ATOM 9674 O SER F 317	49.703 17.525 58.153 1.00 60.08	O
ATOM 9675 CB SER F 317	52.712 16.281 58.533 1.00 63.06	C
ATOM 9676 OG SER F 317	54.006 16.859 58.751 1.00 66.28	O
ATOM 9677 N ALA F 318	51.186 18.799 59.344 1.00 57.44	N
ATOM 9678 CA ALA F 318	50.122 19.425 60.121 1.00 56.02	C
ATOM 9679 C ALA F 318	49.114 20.032 59.140 1.00 55.80	C
ATOM 9680 O ALA F 318	47.902 19.846 59.281 1.00 55.97	O
ATOM 9681 CB ALA F 318	50.712 20.469 61.024 1.00 56.29	C
ATOM 9682 N LEU F 319	49.642 20.755 58.145 1.00 54.03	N
ATOM 9683 CA LEU F 319	48.804 21.401 57.164 1.00 52.32	C
ATOM 9684 C LEU F 319	48.133 20.373 56.310 1.00 53.84	C
ATOM 9685 O LEU F 319	46.947 20.465 56.053 1.00 54.43	O
ATOM 9686 CB LEU F 319	49.636 22.322 56.300 1.00 50.71	C
ATOM 9687 CG LEU F 319	50.149 23.572 57.007 1.00 50.11	C
ATOM 9688 CD1 LEU F 319	51.064 24.328 56.054 1.00 49.82	C
ATOM 9689 CD2 LEU F 319	48.990 24.419 57.502 1.00 49.44	C
ATOM 9690 N LEU F 320	48.861 19.348 55.901 1.00 56.35	N
ATOM 9691 CA LEU F 320	48.275 18.289 55.072 1.00 58.32	C
ATOM 9692 C LEU F 320	47.143 17.594 55.799 1.00 61.15	C
ATOM 9693 O LEU F 320	46.190 17.106 55.215 1.00 61.84	O

ATOM	9694	CB	LEU F 320	49.380	17.296	54.714	1.00	57.43	C
ATOM	9695	CG	LEU F 320	50.019	17.672	53.380	1.00	57.18	C
ATOM	9696	CD1	LEU F 320	51.168	16.743	53.056	1.00	57.66	C
ATOM	9697	CD2	LEU F 320	48.925	17.638	52.324	1.00	57.12	C
ATOM	9698	N	ASP F 321	47.239	17.536	57.119	1.00	64.37	N
ATOM	9699	CA	ASP F 321	46.237	16.948	57.949	1.00	67.60	C
ATOM	9700	C	ASP F 321	44.987	17.770	58.152	1.00	66.26	C
ATOM	9701	O	ASP F 321	43.907	17.196	58.252	1.00	67.90	O
ATOM	9702	CB	ASP F 321	46.853	16.781	59.354	1.00	73.32	C
ATOM	9703	CG	ASP F 321	47.124	15.295	59.557	1.00	78.59	C
ATOM	9704	OD1	ASP F 321	46.976	14.544	58.552	1.00	80.78	O
ATOM	9705	OD2	ASP F 321	47.477	14.948	60.720	1.00	81.32	O
ATOM	9706	N	ALA F 322	45.108	19.083	58.242	1.00	63.24	N
ATOM	9707	CA	ALA F 322	43.958	19.936	58.503	1.00	60.08	C
ATOM	9708	C	ALA F 322	43.033	20.002	57.317	1.00	58.88	C
ATOM	9709	O	ALA F 322	41.900	20.464	57.447	1.00	59.21	O
ATOM	9710	CB	ALA F 322	44.522	21.300	58.884	1.00	60.18	C
ATOM	9711	N	GLU F 323	43.470	19.582	56.141	1.00	57.00	N
ATOM	9712	CA	GLU F 323	42.628	19.671	54.958	1.00	55.45	C
ATOM	9713	C	GLU F 323	41.241	19.190	55.251	1.00	54.86	C
ATOM	9714	O	GLU F 323	41.034	18.185	55.907	1.00	56.46	O
ATOM	9715	CB	GLU F 323	43.305	18.889	53.838	1.00	55.79	C
ATOM	9716	CG	GLU F 323	44.409	19.760	53.209	1.00	56.41	C
ATOM	9717	CD	GLU F 323	43.739	20.818	52.348	1.00	57.17	C
ATOM	9718	OE1	GLU F 323	43.024	20.496	51.370	1.00	57.86	O
ATOM	9719	OE2	GLU F 323	43.882	22.012	52.631	1.00	57.03	O
ATOM	9720	N	PRO F 324	40.255	19.914	54.792	1.00	54.88	N
ATOM	9721	CA	PRO F 324	38.845	19.605	54.934	1.00	54.74	C
ATOM	9722	C	PRO F 324	38.428	18.544	53.926	1.00	54.63	C
ATOM	9723	O	PRO F 324	39.163	18.239	52.993	1.00	54.95	O
ATOM	9724	CB	PRO F 324	38.077	20.892	54.563	1.00	54.67	C
ATOM	9725	CG	PRO F 324	39.039	21.524	53.604	1.00	54.37	C
ATOM	9726	CD	PRO F 324	40.450	21.122	53.977	1.00	55.27	C
ATOM	9727	N	PRO F 325	37.250	18.014	54.104	1.00	54.95	N
ATOM	9728	CA	PRO F 325	36.670	17.011	53.245	1.00	56.73	C
ATOM	9729	C	PRO F 325	36.267	17.672	51.935	1.00	58.47	C
ATOM	9730	O	PRO F 325	36.105	18.896	51.993	1.00	59.71	O
ATOM	9731	CB	PRO F 325	35.368	16.561	53.954	1.00	56.50	C
ATOM	9732	CG	PRO F 325	35.027	17.801	54.739	1.00	55.51	C
ATOM	9733	CD	PRO F 325	36.341	18.387	55.188	1.00	55.82	C
ATOM	9734	N	ILE F 326	36.071	16.988	50.834	1.00	59.63	N
ATOM	9735	CA	ILE F 326	35.597	17.598	49.604	1.00	61.67	C
ATOM	9736	C	ILE F 326	34.065	17.464	49.606	1.00	61.08	C
ATOM	9737	O	ILE F 326	33.598	16.331	49.751	1.00	62.58	O
ATOM	9738	CB	ILE F 326	36.020	16.973	48.265	1.00	64.22	C

ATOM	9739	CG1 ILE F 326	35.729	15.472	48.160	1.00	66.76	C
ATOM	9740	CG2 ILE F 326	37.489	17.245	47.925	1.00	64.81	C
ATOM	9741	CD1 ILE F 326	36.186	14.539	49.268	1.00	69.00	C
ATOM	9742	N LEU F 327	33.286	18.514	49.471	1.00	59.83	N
ATOM	9743	CA LEU F 327	31.837	18.354	49.480	1.00	59.01	C
ATOM	9744	C LEU F 327	31.345	17.922	48.116	1.00	60.14	C
ATOM	9745	O LEU F 327	32.115	17.939	47.156	1.00	60.86	O
ATOM	9746	CB LEU F 327	31.214	19.684	49.901	1.00	57.70	C
ATOM	9747	CG LEU F 327	31.777	20.287	51.182	1.00	57.55	C
ATOM	9748	CD1 LEU F 327	30.782	21.285	51.776	1.00	57.69	C
ATOM	9749	CD2 LEU F 327	32.117	19.257	52.241	1.00	57.43	C
ATOM	9750	N TYR F 328	30.089	17.529	47.994	1.00	61.33	N
ATOM	9751	CA TYR F 328	29.522	17.172	46.703	1.00	62.52	C
ATOM	9752	C TYR F 328	28.386	18.181	46.541	1.00	63.58	C
ATOM	9753	O TYR F 328	27.787	18.516	47.561	1.00	63.48	O
ATOM	9754	CB TYR F 328	28.866	15.796	46.605	1.00	63.71	C
ATOM	9755	CG TYR F 328	29.933	14.732	46.471	1.00	64.32	C
ATOM	9756	CD1 TYR F 328	30.548	14.151	47.562	1.00	64.90	C
ATOM	9757	CD2 TYR F 328	30.317	14.351	45.203	1.00	64.90	C
ATOM	9758	CE1 TYR F 328	31.533	13.198	47.392	1.00	66.06	C
ATOM	9759	CE2 TYR F 328	31.295	13.395	45.025	1.00	65.70	C
ATOM	9760	CZ TYR F 328	31.904	12.833	46.120	1.00	66.42	C
ATOM	9761	OH TYR F 328	32.889	11.890	45.884	1.00	68.16	O
ATOM	9762	N SER F 329	28.133	18.592	45.333	1.00	65.88	N
ATOM	9763	CA SER F 329	27.054	19.541	45.092	1.00	68.50	C
ATOM	9764	C SER F 329	25.712	18.825	45.264	1.00	71.15	C
ATOM	9765	O SER F 329	25.556	17.659	44.962	1.00	69.43	O
ATOM	9766	CB SER F 329	27.102	20.126	43.683	1.00	68.03	C
ATOM	9767	OG SER F 329	25.839	20.726	43.440	1.00	68.18	O
ATOM	9768	N GLU F 330	24.743	19.570	45.772	1.00	76.47	N
ATOM	9769	CA GLU F 330	23.389	19.115	46.031	1.00	80.61	C
ATOM	9770	C GLU F 330	22.727	18.695	44.721	1.00	81.23	C
ATOM	9771	O GLU F 330	22.859	19.388	43.715	1.00	82.27	O
ATOM	9772	CB GLU F 330	22.589	20.215	46.728	1.00	84.17	C
ATOM	9773	CG GLU F 330	21.383	20.767	45.992	1.00	88.92	C
ATOM	9774	CD GLU F 330	21.510	22.185	45.467	1.00	91.99	C
ATOM	9775	OE1 GLU F 330	21.304	23.149	46.266	1.00	93.25	O
ATOM	9776	OE2 GLU F 330	21.809	22.337	44.246	1.00	93.41	O
ATOM	9777	N PHE F 337	19.883	24.928	34.219	1.00	86.00	N
ATOM	9778	CA PHE F 337	20.742	25.994	34.681	1.00	85.03	C
ATOM	9779	C PHE F 337	20.201	27.364	34.287	1.00	83.38	C
ATOM	9780	O PHE F 337	20.007	27.566	33.099	1.00	83.77	O
ATOM	9781	CB PHE F 337	22.159	25.935	34.088	1.00	85.89	C
ATOM	9782	CG PHE F 337	23.038	25.026	34.898	1.00	87.17	C
ATOM	9783	CD1 PHE F 337	22.817	24.805	36.239	1.00	87.56	C

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ATOM 9784	CD2 PHE F 337	24.095 24.380 34.276 1.00 87.89	C
ATOM 9785	CE1 PHE F 337	23.642 23.957 36.942 1.00 88.83	C
ATOM 9786	CE2 PHE F 337	24.929 23.526 34.962 1.00 88.18	C
ATOM 9787	CZ PHE F 337	24.698 23.318 36.308 1.00 89.08	C
ATOM 9788	N SER F 338	20.037 28.218 35.270 1.00 80.62	N
ATOM 9789	CA SER F 338	19.577 29.573 34.995 1.00 78.22	C
ATOM 9790	C SER F 338	20.401 30.467 35.897 1.00 76.60	C
ATOM 9791	O SER F 338	20.845 29.967 36.939 1.00 76.99	O
ATOM 9792	CB SER F 338	18.088 29.667 35.311 1.00 78.08	C
ATOM 9793	OG SER F 338	17.785 29.015 36.523 1.00 77.58	O
ATOM 9794	N GLU F 339	20.575 31.736 35.600 1.00 74.82	N
ATOM 9795	CA GLU F 339	21.318 32.604 36.534 1.00 73.09	C
ATOM 9796	C GLU F 339	20.939 32.174 37.951 1.00 71.30	C
ATOM 9797	O GLU F 339	21.769 31.721 38.735 1.00 70.30	O
ATOM 9798	CB GLU F 339	20.958 34.040 36.203 1.00 73.57	C
ATOM 9799	CG GLU F 339	21.102 35.120 37.254 1.00 74.18	C
ATOM 9800	CD GLU F 339	21.495 36.392 36.517 1.00 75.77	C
ATOM 9801	OE1 GLU F 339	22.483 36.313 35.744 1.00 75.89	O
ATOM 9802	OE2 GLU F 339	20.817 37.433 36.705 1.00 77.28	O
ATOM 9803	N ALA F 340	19.648 32.249 38.293 1.00 69.59	N
ATOM 9804	CA ALA F 340	19.192 31.861 39.607 1.00 67.96	C
ATOM 9805	C ALA F 340	19.566 30.438 39.970 1.00 66.96	C
ATOM 9806	O ALA F 340	20.091 30.235 41.066 1.00 68.75	O
ATOM 9807	CB ALA F 340	17.687 32.024 39.737 1.00 67.62	C
ATOM 9808	N SER F 341	19.302 29.459 39.142 1.00 65.15	N
ATOM 9809	CA SER F 341	19.618 28.088 39.529 1.00 65.19	C
ATOM 9810	C SER F 341	21.108 27.902 39.705 1.00 63.98	C
ATOM 9811	O SER F 341	21.522 27.252 40.673 1.00 64.74	O
ATOM 9812	CB SER F 341	19.004 27.077 38.566 1.00 67.22	C
ATOM 9813	OG SER F 341	19.940 26.356 37.790 1.00 69.32	O
ATOM 9814	N MET F 342	21.937 28.429 38.812 1.00 62.49	N
ATOM 9815	CA MET F 342	23.380 28.262 38.976 1.00 60.83	C
ATOM 9816	C MET F 342	23.917 28.994 40.201 1.00 59.89	C
ATOM 9817	O MET F 342	24.616 28.406 41.027 1.00 60.05	O
ATOM 9818	CB MET F 342	24.168 28.719 37.751 1.00 60.66	C
ATOM 9819	CG MET F 342	25.596 28.200 37.887 1.00 61.87	C
ATOM 9820	SD MET F 342	26.497 28.176 36.308 1.00 63.51	S
ATOM 9821	CE MET F 342	26.629 29.935 36.028 1.00 62.32	C
ATOM 9822	N MET F 343	23.563 30.272 40.396 1.00 58.10	N
ATOM 9823	CA MET F 343	24.029 31.011 41.555 1.00 56.16	C
ATOM 9824	C MET F 343	23.676 30.186 42.780 1.00 56.22	C
ATOM 9825	O MET F 343	24.486 30.013 43.683 1.00 57.06	O
ATOM 9826	CB MET F 343	23.404 32.383 41.634 1.00 56.11	C
ATOM 9827	CG MET F 343	24.093 33.365 40.708 1.00 56.34	C
ATOM 9828	SD MET F 343	25.845 33.433 41.051 1.00 56.93	S

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ATOM 9829	CE MET F 343	25.848 33.732 42.820 1.00 55.38	C
ATOM 9830	N GLY F 344	22.460 29.655 42.797 1.00 55.26	N
ATOM 9831	CA GLY F 344	22.027 28.824 43.901 1.00 54.47	C
ATOM 9832	C GLY F 344	23.031 27.729 44.216 1.00 53.83	C
ATOM 9833	O GLY F 344	23.477 27.716 45.366 1.00 53.45	O
ATOM 9834	N LEU F 345	23.372 26.851 43.267 1.00 53.87	N
ATOM 9835	CA LEU F 345	24.314 25.771 43.552 1.00 53.39	C
ATOM 9836	C LEU F 345	25.656 26.242 44.104 1.00 52.00	C
ATOM 9837	O LEU F 345	26.099 25.789 45.146 1.00 51.76	O
ATOM 9838	CB LEU F 345	24.739 25.014 42.299 1.00 54.69	C
ATOM 9839	CG LEU F 345	23.653 24.140 41.677 1.00 57.12	C
ATOM 9840	CD1 LEU F 345	23.450 24.634 40.246 1.00 57.95	C
ATOM 9841	CD2 LEU F 345	24.072 22.682 41.765 1.00 57.27	C
ATOM 9842	N LEU F 346	26.249 27.134 43.309 1.00 49.99	N
ATOM 9843	CA LEU F 346	27.546 27.717 43.623 1.00 47.43	C
ATOM 9844	C LEU F 346	27.526 28.269 45.029 1.00 46.98	C
ATOM 9845	O LEU F 346	28.261 27.925 45.955 1.00 46.10	O
ATOM 9846	CB LEU F 346	27.764 28.728 42.499 1.00 46.52	C
ATOM 9847	CG LEU F 346	28.182 28.091 41.178 1.00 46.34	C
ATOM 9848	CD1 LEU F 346	28.806 29.155 40.289 1.00 47.33	C
ATOM 9849	CD2 LEU F 346	29.175 26.943 41.340 1.00 46.14	C
ATOM 9850	N THR F 347	26.562 29.149 45.243 1.00 46.52	N
ATOM 9851	CA THR F 347	26.333 29.794 46.530 1.00 46.62	C
ATOM 9852	C THR F 347	26.099 28.809 47.631 1.00 47.13	C
ATOM 9853	O THR F 347	26.665 28.944 48.703 1.00 48.40	O
ATOM 9854	CB THR F 347	25.182 30.771 46.232 1.00 46.91	C
ATOM 9855	OG1 THR F 347	25.774 32.084 46.378 1.00 49.31	O
ATOM 9856	CG2 THR F 347	23.919 30.552 46.981 1.00 44.84	C
ATOM 9857	N ASN F 348	25.305 27.770 47.451 1.00 48.46	N
ATOM 9858	CA ASN F 348	25.022 26.738 48.432 1.00 48.26	C
ATOM 9859	C ASN F 348	26.307 26.002 48.775 1.00 46.59	C
ATOM 9860	O ASN F 348	26.704 25.822 49.913 1.00 47.10	O
ATOM 9861	CB ASN F 348	24.011 25.751 47.845 1.00 51.69	C
ATOM 9862	CG ASN F 348	23.760 24.555 48.771 1.00 55.48	C
ATOM 9863	OD1 ASN F 348	24.408 23.479 48.722 1.00 55.42	O
ATOM 9864	ND2 ASN F 348	22.764 24.796 49.662 1.00 56.81	N
ATOM 9865	N LEU F 349	27.026 25.552 47.772 1.00 45.09	N
ATOM 9866	CA LEU F 349	28.291 24.853 47.949 1.00 43.71	C
ATOM 9867	C LEU F 349	29.231 25.731 48.767 1.00 42.81	C
ATOM 9868	O LEU F 349	29.848 25.257 49.723 1.00 42.31	O
ATOM 9869	CB LEU F 349	28.830 24.503 46.549 1.00 44.45	C
ATOM 9870	CG LEU F 349	30.133 23.716 46.557 1.00 45.86	C
ATOM 9871	CD1 LEU F 349	29.887 22.339 47.210 1.00 46.82	C
ATOM 9872	CD2 LEU F 349	30.750 23.524 45.196 1.00 46.02	C
ATOM 9873	N ALA F 350	29.345 27.026 48.466 1.00 41.52	N

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ATOM 9874	CA	ALA F 350	30.202	27.936	49.203	1.00	41.77	C
ATOM 9875	C	ALA F 350	29.816	27.962	50.679	1.00	42.49	C
ATOM 9876	O	ALA F 350	30.596	27.769	51.615	1.00	42.13	O
ATOM 9877	CB	ALA F 350	30.124	29.372	48.675	1.00	40.60	C
ATOM 9878	N	ASP F 351	28.525	28.191	50.915	1.00	43.50	N
ATOM 9879	CA	ASP F 351	28.030	28.234	52.278	1.00	45.60	C
ATOM 9880	C	ASP F 351	28.426	27.001	53.080	1.00	45.95	C
ATOM 9881	O	ASP F 351	28.728	27.096	54.279	1.00	46.27	O
ATOM 9882	CB	ASP F 351	26.533	28.473	52.268	1.00	47.78	C
ATOM 9883	CG	ASP F 351	26.046	28.618	53.706	1.00	50.93	C
ATOM 9884	OD1	ASP F 351	26.283	29.642	54.368	1.00	51.37	O
ATOM 9885	OD2	ASP F 351	25.391	27.655	54.173	1.00	53.67	O
ATOM 9886	N	ARG F 352	28.420	25.824	52.473	1.00	45.67	N
ATOM 9887	CA	ARG F 352	28.803	24.596	53.147	1.00	46.05	C
ATOM 9888	C	ARG F 352	30.293	24.467	53.412	1.00	46.57	C
ATOM 9889	O	ARG F 352	30.722	24.060	54.504	1.00	47.00	O
ATOM 9890	CB	ARG F 352	28.309	23.436	52.304	1.00	46.17	C
ATOM 9891	CG	ARG F 352	26.808	23.292	52.512	1.00	47.80	C
ATOM 9892	CD	ARG F 352	26.534	21.778	52.359	1.00	49.32	C
ATOM 9893	NE	ARG F 352	26.365	21.574	50.926	1.00	50.87	N
ATOM 9894	CZ	ARG F 352	26.946	20.567	50.257	1.00	51.50	C
ATOM 9895	NH1	ARG F 352	27.702	19.705	50.916	1.00	50.49	N
ATOM 9896	NH2	ARG F 352	26.676	20.531	48.944	1.00	51.49	N
ATOM 9897	N	GLU F 353	31.147	24.843	52.458	1.00	46.06	N
ATOM 9898	CA	GLU F 353	32.597	24.787	52.660	1.00	44.68	C
ATOM 9899	C	GLU F 353	33.040	25.778	53.742	1.00	43.89	C
ATOM 9900	O	GLU F 353	34.056	25.639	54.424	1.00	43.07	O
ATOM 9901	CB	GLU F 353	33.340	25.122	51.371	1.00	44.29	C
ATOM 9902	CG	GLU F 353	32.762	24.459	50.130	1.00	44.90	C
ATOM 9903	CD	GLU F 353	33.711	24.620	48.960	1.00	45.99	C
ATOM 9904	OE1	GLU F 353	34.887	24.241	49.117	1.00	46.44	O
ATOM 9905	OE2	GLU F 353	33.308	25.119	47.899	1.00	47.25	O
ATOM 9906	N	LEU F 354	32.247	26.836	53.950	1.00	43.34	N
ATOM 9907	CA	LEU F 354	32.584	27.852	54.934	1.00	43.06	C
ATOM 9908	C	LEU F 354	32.680	27.208	56.292	1.00	43.60	C
ATOM 9909	O	LEU F 354	33.615	27.463	57.057	1.00	43.45	O
ATOM 9910	CB	LEU F 354	31.609	29.031	54.902	1.00	42.06	C
ATOM 9911	CG	LEU F 354	32.116	30.024	53.818	1.00	41.89	C
ATOM 9912	CD1	LEU F 354	30.961	30.802	53.239	1.00	42.03	C
ATOM 9913	CD2	LEU F 354	33.205	30.881	54.443	1.00	40.52	C
ATOM 9914	N	VAL F 355	31.688	26.340	56.534	1.00	44.19	N
ATOM 9915	CA	VAL F 355	31.719	25.618	57.822	1.00	43.82	C
ATOM 9916	C	VAL F 355	33.026	24.849	57.963	1.00	44.11	C
ATOM 9917	O	VAL F 355	33.797	25.021	58.901	1.00	44.66	O
ATOM 9918	CB	VAL F 355	30.509	24.682	57.890	1.00	41.67	C

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ATOM	9919	CG1 VAL F 355	30.568	23.938	59.191	1.00	40.99	C
ATOM	9920	CG2 VAL F 355	29.276	25.541	57.764	1.00	42.17	C
ATOM	9921	N HIS F 356	33.363	24.019	56.985	1.00	43.95	N
ATOM	9922	CA HIS F 356	34.607	23.267	57.066	1.00	45.14	C
ATOM	9923	C HIS F 356	35.765	24.222	57.213	1.00	44.30	C
ATOM	9924	O HIS F 356	36.682	24.016	58.008	1.00	44.09	O
ATOM	9925	CB HIS F 356	34.690	22.340	55.844	1.00	48.01	C
ATOM	9926	CG HIS F 356	33.569	21.342	55.974	1.00	51.72	C
ATOM	9927	ND1 HIS F 356	33.751	20.044	56.403	1.00	53.60	N
ATOM	9928	CD2 HIS F 356	32.240	21.467	55.770	1.00	53.10	C
ATOM	9929	CE1 HIS F 356	32.580	19.434	56.435	1.00	53.89	C
ATOM	9930	NE2 HIS F 356	31.634	20.265	56.056	1.00	53.29	N
ATOM	9931	N MET F 357	35.728	25.311	56.441	1.00	43.92	N
ATOM	9932	CA MET F 357	36.797	26.279	56.449	1.00	43.10	C
ATOM	9933	C MET F 357	37.175	26.739	57.856	1.00	43.05	C
ATOM	9934	O MET F 357	38.354	26.763	58.204	1.00	43.76	O
ATOM	9935	CB MET F 357	36.486	27.554	55.656	1.00	42.86	C
ATOM	9936	CG MET F 357	37.813	28.308	55.484	1.00	42.98	C
ATOM	9937	SD MET F 357	37.574	29.868	54.643	1.00	43.25	S
ATOM	9938	CE MET F 357	37.137	29.259	52.991	1.00	43.78	C
ATOM	9939	N ILE F 358	36.174	27.137	58.616	1.00	41.67	N
ATOM	9940	CA ILE F 358	36.371	27.608	59.972	1.00	41.23	C
ATOM	9941	C ILE F 358	37.132	26.581	60.781	1.00	42.66	C
ATOM	9942	O ILE F 358	38.079	26.929	61.491	1.00	43.00	O
ATOM	9943	CB ILE F 358	35.003	27.877	60.634	1.00	39.57	C
ATOM	9944	CG1 ILE F 358	34.325	28.975	59.814	1.00	39.81	C
ATOM	9945	CG2 ILE F 358	35.123	28.255	62.078	1.00	37.70	C
ATOM	9946	CD1 ILE F 358	32.999	29.421	60.382	1.00	41.24	C
ATOM	9947	N ASN F 359	36.716	25.332	60.677	1.00	44.95	N
ATOM	9948	CA ASN F 359	37.375	24.250	61.394	1.00	47.81	C
ATOM	9949	C ASN F 359	38.826	24.158	60.963	1.00	46.61	C
ATOM	9950	O ASN F 359	39.730	24.197	61.801	1.00	47.89	O
ATOM	9951	CB ASN F 359	36.696	22.907	61.058	1.00	52.88	C
ATOM	9952	CG ASN F 359	35.426	22.863	61.893	1.00	56.61	C
ATOM	9953	OD1 ASN F 359	35.709	22.917	63.097	1.00	60.88	O
ATOM	9954	ND2 ASN F 359	34.216	22.808	61.385	1.00	57.37	N
ATOM	9955	N TRP F 360	39.023	24.078	59.653	1.00	43.52	N
ATOM	9956	CA TRP F 360	40.373	24.013	59.131	1.00	42.62	C
ATOM	9957	C TRP F 360	41.264	25.111	59.670	1.00	42.88	C
ATOM	9958	O TRP F 360	42.406	24.935	60.061	1.00	42.92	O
ATOM	9959	CB TRP F 360	40.226	24.186	57.614	1.00	42.66	C
ATOM	9960	CG TRP F 360	41.553	24.512	57.001	1.00	42.12	C
ATOM	9961	CD1 TRP F 360	42.551	23.635	56.778	1.00	41.75	C
ATOM	9962	CD2 TRP F 360	41.999	25.803	56.561	1.00	42.44	C
ATOM	9963	NE1 TRP F 360	43.590	24.317	56.218	1.00	43.62	N

ATOM	9964	CE2 TRP F 360	43.299	25.645	56.061	1.00	42.40	C
ATOM	9965	CE3 TRP F 360	41.419	27.082	56.547	1.00	42.27	C
ATOM	9966	CZ2 TRP F 360	44.067	26.675	55.548	1.00	41.65	C
ATOM	9967	CZ3 TRP F 360	42.177	28.116	56.036	1.00	42.74	C
ATOM	9968	CH2 TRP F 360	43.478	27.906	55.548	1.00	42.73	C
ATOM	9969	N ALA F 361	40.770	26.351	59.666	1.00	44.32	N
ATOM	9970	CA ALA F 361	41.496	27.515	60.143	1.00	44.21	C
ATOM	9971	C ALA F 361	42.042	27.224	61.523	1.00	45.40	C
ATOM	9972	O ALA F 361	43.218	27.491	61.736	1.00	45.18	O
ATOM	9973	CB ALA F 361	40.612	28.740	60.157	1.00	43.35	C
ATOM	9974	N LYS F 362	41.247	26.664	62.421	1.00	47.63	N
ATOM	9975	CA LYS F 362	41.695	26.383	63.771	1.00	50.51	C
ATOM	9976	C LYS F 362	42.934	25.524	63.877	1.00	50.52	C
ATOM	9977	O LYS F 362	43.657	25.648	64.864	1.00	50.40	O
ATOM	9978	CB LYS F 362	40.524	25.801	64.571	1.00	53.28	C
ATOM	9979	CG LYS F 362	39.434	26.852	64.802	1.00	56.10	C
ATOM	9980	CD LYS F 362	39.915	27.861	65.822	1.00	58.93	C
ATOM	9981	CE LYS F 362	38.881	28.178	66.898	1.00	61.09	C
ATOM	9982	NZ LYS F 362	39.409	29.008	68.036	1.00	61.11	N
ATOM	9983	N ARG F 363	43.241	24.677	62.936	1.00	50.76	N
ATOM	9984	CA ARG F 363	44.398	23.836	62.900	1.00	52.41	C
ATOM	9985	C ARG F 363	45.589	24.400	62.149	1.00	51.42	C
ATOM	9986	O ARG F 363	46.595	23.700	62.027	1.00	52.42	O
ATOM	9987	CB ARG F 363	44.027	22.559	62.132	1.00	57.14	C
ATOM	9988	CG ARG F 363	42.522	22.408	62.005	1.00	63.12	C
ATOM	9989	CD ARG F 363	42.037	21.691	63.293	1.00	69.42	C
ATOM	9990	NE ARG F 363	42.619	20.335	63.225	1.00	75.02	N
ATOM	9991	CZ ARG F 363	42.205	19.469	62.282	1.00	78.35	C
ATOM	9992	NH1 ARG F 363	41.238	19.854	61.445	1.00	79.78	N
ATOM	9993	NH2 ARG F 363	42.748	18.249	62.182	1.00	79.54	N
ATOM	9994	N VAL F 364	45.563	25.585	61.582	1.00	50.05	N
ATOM	9995	CA VAL F 364	46.754	26.080	60.871	1.00	47.95	C
ATOM	9996	C VAL F 364	47.689	26.535	61.964	1.00	47.06	C
ATOM	9997	O VAL F 364	47.364	27.425	62.733	1.00	47.62	O
ATOM	9998	CB VAL F 364	46.336	27.238	59.945	1.00	46.96	C
ATOM	9999	CG1 VAL F 364	47.520	27.990	59.395	1.00	46.14	C
ATOM	10000	CG2 VAL F 364	45.447	26.686	58.846	1.00	47.06	C
ATOM	10001	N PRO F 365	48.834	25.947	62.111	1.00	46.86	N
ATOM	10002	CA PRO F 365	49.795	26.303	63.142	1.00	47.30	C
ATOM	10003	C PRO F 365	49.914	27.803	63.280	1.00	47.97	C
ATOM	10004	O PRO F 365	50.102	28.494	62.282	1.00	49.63	O
ATOM	10005	CB PRO F 365	51.119	25.617	62.755	1.00	46.66	C
ATOM	10006	CG PRO F 365	50.541	24.380	62.100	1.00	47.21	C
ATOM	10007	CD PRO F 365	49.314	24.832	61.289	1.00	47.57	C
ATOM	10008	N GLY F 366	49.771	28.338	64.487	1.00	48.33	N

ATOM 10009	CA	GLY F 366	49.879	29.737	64.813	1.00	47.57	C
ATOM 10010	C	GLY F 366	48.589	30.521	64.858	1.00	47.62	C
ATOM 10011	O	GLY F 366	48.493	31.600	65.468	1.00	48.03	O
ATOM 10012	N	PHE F 367	47.562	30.022	64.184	1.00	46.85	N
ATOM 10013	CA	PHE F 367	46.281	30.718	64.081	1.00	46.59	C
ATOM 10014	C	PHE F 367	45.595	30.997	65.410	1.00	46.36	C
ATOM 10015	O	PHE F 367	45.152	32.047	65.848	1.00	45.52	O
ATOM 10016	CB	PHE F 367	45.325	29.920	63.189	1.00	44.75	C
ATOM 10017	CG	PHE F 367	44.071	30.654	62.850	1.00	44.60	C
ATOM 10018	CD1	PHE F 367	44.073	31.662	61.912	1.00	44.16	C
ATOM 10019	CD2	PHE F 367	42.875	30.334	63.491	1.00	45.67	C
ATOM 10020	CE1	PHE F 367	42.919	32.340	61.592	1.00	44.81	C
ATOM 10021	CE2	PHE F 367	41.696	30.997	63.180	1.00	45.38	C
ATOM 10022	CZ	PHE F 367	41.723	31.996	62.222	1.00	45.46	C
ATOM 10023	N	VAL F 368	45.510	29.919	66.150	1.00	46.98	N
ATOM 10024	CA	VAL F 368	44.884	29.809	67.454	1.00	47.50	C
ATOM 10025	C	VAL F 368	45.555	30.694	68.470	1.00	48.39	C
ATOM 10026	O	VAL F 368	44.887	31.054	69.446	1.00	49.08	O
ATOM 10027	CB	VAL F 368	44.845	28.309	67.816	1.00	46.46	C
ATOM 10028	CG1	VAL F 368	45.352	28.034	69.195	1.00	46.31	C
ATOM 10029	CG2	VAL F 368	43.434	27.799	67.573	1.00	46.30	C
ATOM 10030	N	ASP F 369	46.810	31.080	68.264	1.00	48.91	N
ATOM 10031	CA	ASP F 369	47.504	31.989	69.146	1.00	49.05	C
ATOM 10032	C	ASP F 369	46.994	33.411	68.959	1.00	48.03	C
ATOM 10033	O	ASP F 369	47.416	34.260	69.730	1.00	49.36	O
ATOM 10034	CB	ASP F 369	49.005	32.039	68.908	1.00	52.31	C
ATOM 10035	CG	ASP F 369	49.679	30.684	68.963	1.00	56.87	C
ATOM 10036	OD1	ASP F 369	49.349	29.868	69.872	1.00	59.10	O
ATOM 10037	OD2	ASP F 369	50.566	30.390	68.109	1.00	57.95	O
ATOM 10038	N	LEU F 370	46.158	33.800	68.021	1.00	46.74	N
ATOM 10039	CA	LEU F 370	45.655	35.163	67.888	1.00	44.48	C
ATOM 10040	C	LEU F 370	44.419	35.379	68.749	1.00	42.98	C
ATOM 10041	O	LEU F 370	43.795	34.398	69.161	1.00	42.49	O
ATOM 10042	CB	LEU F 370	45.321	35.373	66.403	1.00	45.02	C
ATOM 10043	CG	LEU F 370	46.514	35.297	65.452	1.00	45.13	C
ATOM 10044	CD1	LEU F 370	46.110	35.500	64.015	1.00	44.83	C
ATOM 10045	CD2	LEU F 370	47.506	36.398	65.830	1.00	45.41	C
ATOM 10046	N	THR F 371	44.016	36.601	69.059	1.00	41.35	N
ATOM 10047	CA	THR F 371	42.833	36.757	69.881	1.00	40.62	C
ATOM 10048	C	THR F 371	41.653	36.256	69.075	1.00	42.21	C
ATOM 10049	O	THR F 371	41.627	36.260	67.864	1.00	42.62	O
ATOM 10050	CB	THR F 371	42.575	38.216	70.192	1.00	40.25	C
ATOM 10051	OG1	THR F 371	42.670	38.876	68.928	1.00	42.32	O
ATOM 10052	CG2	THR F 371	43.594	38.781	71.114	1.00	40.04	C
ATOM 10053	N	LEU F 372	40.602	35.837	69.761	1.00	44.21	N

ATOM 10054	CA LEU F 372	39.418	35.325	69.102	1.00	44.26	C
ATOM 10055	C LEU F 372	38.932	36.292	68.047	1.00	45.09	C
ATOM 10056	O LEU F 372	38.550	35.821	66.966	1.00	46.27	O
ATOM 10057	CB LEU F 372	38.388	35.012	70.186	1.00	43.22	C
ATOM 10058	CG LEU F 372	38.740	33.838	71.093	1.00	41.50	C
ATOM 10059	CD1 LEU F 372	37.680	33.752	72.173	1.00	42.51	C
ATOM 10060	CD2 LEU F 372	38.762	32.559	70.291	1.00	40.77	C
ATOM 10061	N HIS F 373	38.935	37.602	68.274	1.00	45.60	N
ATOM 10062	CA HIS F 373	38.399	38.491	67.238	1.00	46.42	C
ATOM 10063	C HIS F 373	39.328	38.508	66.059	1.00	45.56	C
ATOM 10064	O HIS F 373	38.840	38.440	64.937	1.00	44.91	O
ATOM 10065	CB HIS F 373	38.048	39.845	67.807	1.00	49.57	C
ATOM 10066	CG HIS F 373	36.763	39.812	68.579	1.00	52.32	C
ATOM 10067	ND1 HIS F 373	36.676	39.816	69.958	1.00	53.50	N
ATOM 10068	CD2 HIS F 373	35.497	39.767	68.163	1.00	53.33	C
ATOM 10069	CE1 HIS F 373	35.408	39.782	70.315	1.00	54.25	C
ATOM 10070	NE2 HIS F 373	34.653	39.741	69.241	1.00	54.69	N
ATOM 10071	N ASP F 374	40.637	38.530	66.279	1.00	45.43	N
ATOM 10072	CA ASP F 374	41.558	38.487	65.134	1.00	44.42	C
ATOM 10073	C ASP F 374	41.355	37.269	64.272	1.00	43.20	C
ATOM 10074	O ASP F 374	41.438	37.415	63.053	1.00	43.11	O
ATOM 10075	CB ASP F 374	43.004	38.647	65.603	1.00	45.47	C
ATOM 10076	CG ASP F 374	43.075	40.126	65.975	1.00	48.30	C
ATOM 10077	OD1 ASP F 374	42.115	40.854	65.579	1.00	48.90	O
ATOM 10078	OD2 ASP F 374	44.051	40.564	66.632	1.00	50.38	O
ATOM 10079	N GLN F 375	41.062	36.116	64.853	1.00	42.34	N
ATOM 10080	CA GLN F 375	40.791	34.951	64.031	1.00	42.84	C
ATOM 10081	C GLN F 375	39.583	35.269	63.159	1.00	43.36	C
ATOM 10082	O GLN F 375	39.619	35.161	61.925	1.00	43.87	O
ATOM 10083	CB GLN F 375	40.583	33.750	64.914	1.00	43.60	C
ATOM 10084	CG GLN F 375	41.827	33.439	65.729	1.00	45.60	C
ATOM 10085	CD GLN F 375	41.568	32.352	66.757	1.00	46.87	C
ATOM 10086	OE1 GLN F 375	40.780	31.422	66.560	1.00	47.29	O
ATOM 10087	NE2 GLN F 375	42.244	32.497	67.888	1.00	47.07	N
ATOM 10088	N VAL F 376	38.496	35.752	63.774	1.00	43.02	N
ATOM 10089	CA VAL F 376	37.322	36.091	62.969	1.00	42.27	C
ATOM 10090	C VAL F 376	37.749	37.033	61.861	1.00	42.22	C
ATOM 10091	O VAL F 376	37.412	36.808	60.705	1.00	43.67	O
ATOM 10092	CB VAL F 376	36.139	36.621	63.764	1.00	41.25	C
ATOM 10093	CG1 VAL F 376	34.885	36.524	62.909	1.00	42.60	C
ATOM 10094	CG2 VAL F 376	35.858	35.782	64.983	1.00	40.27	C
ATOM 10095	N HIS F 377	38.514	38.062	62.146	1.00	42.99	N
ATOM 10096	CA HIS F 377	39.001	38.986	61.129	1.00	43.28	C
ATOM 10097	C HIS F 377	39.765	38.268	60.046	1.00	42.83	C
ATOM 10098	O HIS F 377	39.285	38.351	58.901	1.00	43.87	O

ATOM 10099	CB HIS F 377	39.804	40.120	61.773	1.00	43.82	C
ATOM 10100	CG AHIS F 377	40.368	41.134	60.835	0.50	43.00	C
ATOM 10101	CG BHIS F 377	38.815	41.000	62.500	0.50	45.37	C
ATOM 10102	ND1AHIS F 377	39.590	42.070	60.187	0.50	43.19	N
ATOM 10103	ND1BHIS F 377	38.930	41.315	63.832	0.50	45.60	N
ATOM 10104	CD2AHIS F 377	41.632	41.377	60.432	0.50	43.02	C
ATOM 10105	CD2BHIS F 377	37.684	41.620	62.069	0.50	45.70	C
ATOM 10106	CE1AHIS F 377	40.346	42.832	59.421	0.50	42.88	C
ATOM 10107	CE1BHIS F 377	37.937	42.103	64.205	0.50	45.09	C
ATOM 10108	NE2AHIS F 377	41.595	42.430	59.546	0.50	42.80	N
ATOM 10109	NE2BHIS F 377	37.168	42.296	63.156	0.50	45.46	N
ATOM 10110	N LEU F 378	40.848	37.528	60.241	1.00	41.51	N
ATOM 10111	CA LEU F 378	41.470	36.883	59.064	1.00	40.44	C
ATOM 10112	C LEU F 378	40.465	36.050	58.284	1.00	39.92	C
ATOM 10113	O LEU F 378	40.382	36.020	57.037	1.00	38.68	O
ATOM 10114	CB LEU F 378	42.724	36.129	59.482	1.00	41.23	C
ATOM 10115	CG LEU F 378	43.717	36.893	60.386	1.00	40.82	C
ATOM 10116	CD1 LEU F 378	44.893	36.008	60.747	1.00	40.06	C
ATOM 10117	CD2 LEU F 378	44.199	38.162	59.734	1.00	39.28	C
ATOM 10118	N LEU F 379	39.601	35.307	58.975	1.00	40.27	N
ATOM 10119	CA LEU F 379	38.587	34.518	58.288	1.00	39.44	C
ATOM 10120	C LEU F 379	37.741	35.406	57.400	1.00	39.11	C
ATOM 10121	O LEU F 379	37.741	35.194	56.193	1.00	38.45	O
ATOM 10122	CB LEU F 379	37.725	33.772	59.296	1.00	39.11	C
ATOM 10123	CG LEU F 379	38.318	32.362	59.508	1.00	40.15	C
ATOM 10124	CD1 LEU F 379	37.441	31.705	60.581	1.00	40.96	C
ATOM 10125	CD2 LEU F 379	38.438	31.556	58.227	1.00	38.06	C
ATOM 10126	N GLU F 380	37.082	36.405	57.990	1.00	39.47	N
ATOM 10127	CA GLU F 380	36.254	37.307	57.205	1.00	40.79	C
ATOM 10128	C GLU F 380	37.051	37.901	56.056	1.00	42.77	C
ATOM 10129	O GLU F 380	36.580	38.042	54.940	1.00	43.87	O
ATOM 10130	CB GLU F 380	35.715	38.422	58.054	1.00	40.39	C
ATOM 10131	CG GLU F 380	34.729	37.959	59.122	1.00	43.41	C
ATOM 10132	CD GLU F 380	34.453	39.151	60.011	1.00	44.98	C
ATOM 10133	OE1 GLU F 380	35.364	40.007	60.152	1.00	47.79	O
ATOM 10134	OE2 GLU F 380	33.374	39.296	60.582	1.00	46.00	O
ATOM 10135	N CYS F 381	38.303	38.264	56.267	1.00	44.51	N
ATOM 10136	CA CYS F 381	39.090	38.839	55.214	1.00	45.77	C
ATOM 10137	C CYS F 381	39.431	37.884	54.107	1.00	43.13	C
ATOM 10138	O CYS F 381	39.293	38.321	52.966	1.00	41.88	O
ATOM 10139	CB CYS F 381	40.286	39.552	55.869	1.00	50.51	C
ATOM 10140	SG CYS F 381	40.155	41.305	55.384	1.00	63.88	S
ATOM 10141	N ALA F 382	39.868	36.656	54.352	1.00	40.87	N
ATOM 10142	CA ALA F 382	40.259	35.766	53.266	1.00	39.08	C
ATOM 10143	C ALA F 382	39.347	34.668	52.779	1.00	39.12	C

ATOM 10144	O	ALA F 382	39.688	33.906	51.885	1.00	38.15	O
ATOM 10145	CB	ALA F 382	41.475	35.039	53.859	1.00	37.88	C
ATOM 10146	N	TRP F 383	38.133	34.521	53.295	1.00	40.06	N
ATOM 10147	CA	TRP F 383	37.225	33.440	52.930	1.00	38.49	C
ATOM 10148	C	TRP F 383	37.151	33.142	51.460	1.00	38.16	C
ATOM 10149	O	TRP F 383	37.467	32.026	51.053	1.00	38.73	O
ATOM 10150	CB	TRP F 383	35.880	33.677	53.561	1.00	38.28	C
ATOM 10151	CG	TRP F 383	35.000	34.712	52.953	1.00	37.76	C
ATOM 10152	CD1	TRP F 383	34.895	36.036	53.260	1.00	36.51	C
ATOM 10153	CD2	TRP F 383	34.053	34.447	51.908	1.00	37.63	C
ATOM 10154	NE1	TRP F 383	33.945	36.613	52.468	1.00	36.21	N
ATOM 10155	CE2	TRP F 383	33.420	35.675	51.625	1.00	37.28	C
ATOM 10156	CE3	TRP F 383	33.719	33.295	51.188	1.00	37.36	C
ATOM 10157	CZ2	TRP F 383	32.449	35.775	50.636	1.00	37.38	C
ATOM 10158	CZ3	TRP F 383	32.753	33.408	50.211	1.00	37.26	C
ATOM 10159	CH2	TRP F 383	32.131	34.632	49.957	1.00	37.38	C
ATOM 10160	N	LEU F 384	36.788	34.113	50.637	1.00	38.14	N
ATOM 10161	CA	LEU F 384	36.696	33.901	49.194	1.00	36.05	C
ATOM 10162	C	LEU F 384	38.052	33.633	48.585	1.00	35.25	C
ATOM 10163	O	LEU F 384	38.125	32.851	47.649	1.00	34.43	O
ATOM 10164	CB	LEU F 384	35.928	35.038	48.559	1.00	35.43	C
ATOM 10165	CG	LEU F 384	35.605	34.908	47.078	1.00	35.80	C
ATOM 10166	CD1	LEU F 384	34.913	33.586	46.766	1.00	36.21	C
ATOM 10167	CD2	LEU F 384	34.696	36.047	46.633	1.00	35.95	C
ATOM 10168	N	GLU F 385	39.153	34.203	49.063	1.00	36.29	N
ATOM 10169	CA	GLU F 385	40.474	33.902	48.470	1.00	36.48	C
ATOM 10170	C	GLU F 385	40.722	32.415	48.723	1.00	36.30	C
ATOM 10171	O	GLU F 385	41.082	31.709	47.798	1.00	36.28	O
ATOM 10172	CB	GLU F 385	41.621	34.721	49.025	1.00	36.55	C
ATOM 10173	CG	GLU F 385	41.919	36.044	48.377	1.00	37.81	C
ATOM 10174	CD	GLU F 385	42.997	36.840	49.082	1.00	40.00	C
ATOM 10175	OE1	GLU F 385	42.619	37.393	50.149	1.00	40.67	O
ATOM 10176	OE2	GLU F 385	44.180	36.955	48.627	1.00	40.89	O
ATOM 10177	N	ILE F 386	40.491	31.950	49.952	1.00	36.53	N
ATOM 10178	CA	ILE F 386	40.640	30.554	50.291	1.00	37.02	C
ATOM 10179	C	ILE F 386	39.749	29.686	49.389	1.00	37.09	C
ATOM 10180	O	ILE F 386	40.229	28.726	48.783	1.00	36.20	O
ATOM 10181	CB	ILE F 386	40.250	30.145	51.708	1.00	37.27	C
ATOM 10182	CG1	ILE F 386	40.796	31.053	52.794	1.00	39.60	C
ATOM 10183	CG2	ILE F 386	40.758	28.731	51.927	1.00	37.45	C
ATOM 10184	CD1	ILE F 386	42.314	31.140	52.836	1.00	40.65	C
ATOM 10185	N	LEU F 387	38.458	29.998	49.293	1.00	37.75	N
ATOM 10186	CA	LEU F 387	37.599	29.211	48.423	1.00	38.77	C
ATOM 10187	C	LEU F 387	38.125	29.170	46.978	1.00	39.37	C
ATOM 10188	O	LEU F 387	38.066	28.107	46.352	1.00	40.51	O

ATOM 10189	CB LEU F 387	36.179	29.739	48.301	1.00	38.25	C
ATOM 10190	CG LEU F 387	35.216	29.455	49.431	1.00	40.30	C
ATOM 10191	CD1 LEU F 387	33.877	30.170	49.167	1.00	39.62	C
ATOM 10192	CD2 LEU F 387	35.021	27.953	49.664	1.00	40.61	C
ATOM 10193	N MET F 388	38.604	30.290	46.438	1.00	38.48	N
ATOM 10194	CA MET F 388	39.063	30.328	45.065	1.00	37.19	C
ATOM 10195	C MET F 388	40.347	29.550	44.876	1.00	37.70	C
ATOM 10196	O MET F 388	40.429	28.826	43.872	1.00	37.76	O
ATOM 10197	CB MET F 388	39.209	31.722	44.481	1.00	36.71	C
ATOM 10198	CG MET F 388	38.093	32.711	44.661	1.00	37.34	C
ATOM 10199	SD MET F 388	38.116	34.146	43.573	1.00	37.46	S
ATOM 10200	CE MET F 388	36.408	34.579	43.449	1.00	37.42	C
ATOM 10201	N ILE F 389	41.331	29.621	45.769	1.00	38.65	N
ATOM 10202	CA ILE F 389	42.550	28.825	45.480	1.00	39.81	C
ATOM 10203	C ILE F 389	42.209	27.328	45.536	1.00	41.13	C
ATOM 10204	O ILE F 389	42.756	26.498	44.820	1.00	41.83	O
ATOM 10205	CB ILE F 389	43.733	29.218	46.362	1.00	38.00	C
ATOM 10206	CG1 ILE F 389	45.011	28.484	45.961	1.00	36.25	C
ATOM 10207	CG2 ILE F 389	43.441	28.950	47.825	1.00	37.53	C
ATOM 10208	CD1 ILE F 389	46.257	29.160	46.487	1.00	34.71	C
ATOM 10209	N GLY F 390	41.258	26.930	46.367	1.00	41.24	N
ATOM 10210	CA GLY F 390	40.864	25.547	46.457	1.00	42.91	C
ATOM 10211	C GLY F 390	40.313	25.110	45.108	1.00	43.54	C
ATOM 10212	O GLY F 390	40.759	24.117	44.531	1.00	44.30	O
ATOM 10213	N LEU F 391	39.335	25.876	44.627	1.00	43.05	N
ATOM 10214	CA LEU F 391	38.711	25.540	43.353	1.00	42.22	C
ATOM 10215	C LEU F 391	39.783	25.406	42.300	1.00	43.71	C
ATOM 10216	O LEU F 391	39.885	24.426	41.583	1.00	44.85	O
ATOM 10217	CB LEU F 391	37.798	26.671	42.935	1.00	42.46	C
ATOM 10218	CG LEU F 391	37.214	26.653	41.542	1.00	43.85	C
ATOM 10219	CD1 LEU F 391	36.455	25.339	41.330	1.00	45.13	C
ATOM 10220	CD2 LEU F 391	36.237	27.800	41.288	1.00	43.94	C
ATOM 10221	N VAL F 392	40.632	26.433	42.200	1.00	45.19	N
ATOM 10222	CA VAL F 392	41.699	26.443	41.195	1.00	44.59	C
ATOM 10223	C VAL F 392	42.489	25.157	41.261	1.00	45.06	C
ATOM 10224	O VAL F 392	42.683	24.431	40.293	1.00	46.13	O
ATOM 10225	CB VAL F 392	42.579	27.696	41.315	1.00	42.58	C
ATOM 10226	CG1 VAL F 392	43.823	27.562	40.465	1.00	42.02	C
ATOM 10227	CG2 VAL F 392	41.813	28.910	40.793	1.00	41.61	C
ATOM 10228	N TRP F 393	42.937	24.863	42.454	1.00	46.09	N
ATOM 10229	CA TRP F 393	43.769	23.684	42.706	1.00	48.55	C
ATOM 10230	C TRP F 393	43.100	22.384	42.329	1.00	49.16	C
ATOM 10231	O TRP F 393	43.742	21.554	41.700	1.00	51.40	O
ATOM 10232	CB TRP F 393	44.069	23.625	44.207	1.00	49.37	C
ATOM 10233	CG TRP F 393	44.508	22.284	44.664	1.00	49.21	C

ATOM 10234	CD1 TRP F 393	43.801	21.410	45.415	1.00	49.59	C
ATOM 10235	CD2 TRP F 393	45.758	21.664	44.369	1.00	49.88	C
ATOM 10236	NE1 TRP F 393	44.549	20.265	45.633	1.00	50.00	N
ATOM 10237	CE2 TRP F 393	45.752	20.398	45.004	1.00	49.70	C
ATOM 10238	CE3 TRP F 393	46.888	22.060	43.645	1.00	50.21	C
ATOM 10239	CZ2 TRP F 393	46.827	19.523	44.939	1.00	49.76	C
ATOM 10240	CZ3 TRP F 393	47.960	21.179	43.580	1.00	50.79	C
ATOM 10241	CH2 TRP F 393	47.920	19.925	44.223	1.00	50.52	C
ATOM 10242	N ARG F 394	41.848	22.202	42.736	1.00	48.49	N
ATOM 10243	CA ARG F 394	41.168	20.977	42.363	1.00	48.26	C
ATOM 10244	C ARG F 394	40.768	21.048	40.897	1.00	49.54	C
ATOM 10245	O ARG F 394	40.361	20.055	40.307	1.00	51.77	O
ATOM 10246	CB ARG F 394	39.961	20.631	43.203	1.00	47.19	C
ATOM 10247	CG ARG F 394	38.965	21.623	43.674	1.00	45.48	C
ATOM 10248	CD ARG F 394	37.928	20.983	44.585	1.00	44.46	C
ATOM 10249	NE ARG F 394	36.762	21.872	44.620	1.00	46.03	N
ATOM 10250	CZ ARG F 394	36.680	22.973	45.370	1.00	44.99	C
ATOM 10251	NH1 ARG F 394	37.755	23.200	46.108	1.00	44.94	N
ATOM 10252	NH2 ARG F 394	35.631	23.780	45.357	1.00	43.48	N
ATOM 10253	N SER F 395	40.842	22.169	40.217	1.00	50.68	N
ATOM 10254	CA SER F 395	40.450	22.232	38.826	1.00	52.13	C
ATOM 10255	C SER F 395	41.637	22.045	37.903	1.00	54.26	C
ATOM 10256	O SER F 395	41.430	22.047	36.690	1.00	54.51	O
ATOM 10257	CB SER F 395	39.814	23.613	38.598	1.00	51.54	C
ATOM 10258	OG SER F 395	38.434	23.568	38.917	1.00	49.50	O
ATOM 10259	N MET F 396	42.841	21.927	38.429	1.00	56.83	N
ATOM 10260	CA MET F 396	44.049	21.787	37.662	1.00	60.12	C
ATOM 10261	C MET F 396	44.093	20.804	36.507	1.00	63.54	C
ATOM 10262	O MET F 396	44.429	21.178	35.366	1.00	64.11	O
ATOM 10263	CB MET F 396	45.163	21.300	38.583	1.00	60.15	C
ATOM 10264	CG MET F 396	46.413	22.143	38.424	1.00	60.96	C
ATOM 10265	SD MET F 396	47.220	22.086	40.024	1.00	62.82	S
ATOM 10266	CE MET F 396	48.773	21.273	39.595	1.00	63.48	C
ATOM 10267	N GLU F 397	43.756	19.544	36.798	1.00	66.51	N
ATOM 10268	CA GLU F 397	43.786	18.531	35.760	1.00	69.79	C
ATOM 10269	C GLU F 397	42.540	18.502	34.931	1.00	68.28	C
ATOM 10270	O GLU F 397	42.172	17.409	34.479	1.00	70.22	O
ATOM 10271	CB GLU F 397	44.000	17.119	36.311	1.00	75.00	C
ATOM 10272	CG GLU F 397	45.131	16.996	37.322	1.00	81.33	C
ATOM 10273	CD GLU F 397	44.610	17.523	38.658	1.00	85.69	C
ATOM 10274	OE1 GLU F 397	43.356	17.655	38.778	1.00	87.29	O
ATOM 10275	OE2 GLU F 397	45.435	17.825	39.553	1.00	88.64	O
ATOM 10276	N HIS F 398	41.743	19.522	34.719	1.00	66.05	N
ATOM 10277	CA HIS F 398	40.551	19.495	33.880	1.00	64.49	C
ATOM 10278	C HIS F 398	40.620	20.802	33.092	1.00	63.29	C

ATOM 10279	O	HIS F 398	39.863	21.735	33.352	1.00	63.68	O
ATOM 10280	CB	HIS F 398	39.245	19.434	34.635	1.00	65.52	C
ATOM 10281	CG	HIS F 398	39.061	18.207	35.461	1.00	67.05	C
ATOM 10282	ND1	HIS F 398	40.049	17.819	36.345	1.00	67.85	N
ATOM 10283	CD2	HIS F 398	38.080	17.300	35.597	1.00	67.59	C
ATOM 10284	CE1	HIS F 398	39.716	16.724	36.994	1.00	68.51	C
ATOM 10285	NE2	HIS F 398	38.517	16.397	36.553	1.00	68.88	N
ATOM 10286	N	PRO F 399	41.565	20.840	32.173	1.00	61.72	N
ATOM 10287	CA	PRO F 399	41.862	21.995	31.354	1.00	60.49	C
ATOM 10288	C	PRO F 399	40.615	22.608	30.807	1.00	59.48	C
ATOM 10289	O	PRO F 399	39.826	21.800	30.350	1.00	61.07	O
ATOM 10290	CB	PRO F 399	42.739	21.529	30.185	1.00	60.40	C
ATOM 10291	CG	PRO F 399	43.468	20.416	30.887	1.00	61.48	C
ATOM 10292	CD	PRO F 399	42.493	19.770	31.843	1.00	61.36	C
ATOM 10293	N	GLY F 400	40.444	23.905	30.914	1.00	58.11	N
ATOM 10294	CA	GLY F 400	39.254	24.507	30.350	1.00	57.47	C
ATOM 10295	C	GLY F 400	38.013	24.338	31.185	1.00	57.60	C
ATOM 10296	O	GLY F 400	36.976	24.891	30.768	1.00	58.70	O
ATOM 10297	N	LYS F 401	38.105	23.635	32.311	1.00	56.75	N
ATOM 10298	CA	LYS F 401	36.952	23.446	33.168	1.00	56.84	C
ATOM 10299	C	LYS F 401	37.239	23.747	34.651	1.00	55.53	C
ATOM 10300	O	LYS F 401	38.383	23.799	35.141	1.00	54.65	O
ATOM 10301	CB	LYS F 401	36.494	22.001	33.157	1.00	59.55	C
ATOM 10302	CG	LYS F 401	36.372	21.246	31.873	1.00	62.16	C
ATOM 10303	CD	LYS F 401	34.913	20.856	31.654	1.00	65.05	C
ATOM 10304	CE	LYS F 401	34.754	20.511	30.169	1.00	68.08	C
ATOM 10305	NZ	LYS F 401	35.811	19.490	29.823	1.00	70.41	N
ATOM 10306	N	LEU F 402	36.097	23.938	35.342	1.00	52.75	N
ATOM 10307	CA	LEU F 402	36.248	24.202	36.763	1.00	51.51	C
ATOM 10308	C	LEU F 402	35.435	23.136	37.510	1.00	51.31	C
ATOM 10309	O	LEU F 402	34.224	23.034	37.328	1.00	51.45	O
ATOM 10310	CB	LEU F 402	35.810	25.584	37.231	1.00	50.21	C
ATOM 10311	CG	LEU F 402	36.432	26.814	36.612	1.00	49.07	C
ATOM 10312	CD1	LEU F 402	35.497	27.993	36.876	1.00	50.45	C
ATOM 10313	CD2	LEU F 402	37.816	27.058	37.127	1.00	48.02	C
ATOM 10314	N	LEU F 403	36.145	22.422	38.368	1.00	49.91	N
ATOM 10315	CA	LEU F 403	35.536	21.407	39.191	1.00	49.22	C
ATOM 10316	C	LEU F 403	35.025	21.962	40.512	1.00	49.60	C
ATOM 10317	O	LEU F 403	35.693	21.779	41.566	1.00	50.04	O
ATOM 10318	CB	LEU F 403	36.631	20.354	39.477	1.00	50.09	C
ATOM 10319	CG	LEU F 403	36.061	19.003	39.925	1.00	50.59	C
ATOM 10320	CD1	LEU F 403	35.775	18.163	38.697	1.00	51.08	C
ATOM 10321	CD2	LEU F 403	36.969	18.280	40.889	1.00	51.05	C
ATOM 10322	N	PHE F 404	33.839	22.590	40.538	1.00	48.28	N
ATOM 10323	CA	PHE F 404	33.364	23.050	41.853	1.00	48.58	C

ATOM 10324	C	PHE F 404	33.311	21.873	42.806	1.00	50.02	C
ATOM 10325	O	PHE F 404	33.771	21.982	43.922	1.00	50.73	O
ATOM 10326	CB	PHE F 404	31.990	23.733	41.802	1.00	47.90	C
ATOM 10327	CG	PHE F 404	32.216	25.102	41.192	1.00	48.13	C
ATOM 10328	CD1	PHE F 404	32.266	25.227	39.807	1.00	47.82	C
ATOM 10329	CD2	PHE F 404	32.431	26.212	41.987	1.00	47.31	C
ATOM 10330	CE1	PHE F 404	32.496	26.454	39.225	1.00	47.23	C
ATOM 10331	CE2	PHE F 404	32.680	27.437	41.405	1.00	46.93	C
ATOM 10332	CZ	PHE F 404	32.702	27.548	40.037	1.00	47.49	C
ATOM 10333	N	ALA F 405	32.747	20.761	42.364	1.00	52.13	N
ATOM 10334	CA	ALA F 405	32.630	19.524	43.113	1.00	53.76	C
ATOM 10335	C	ALA F 405	33.019	18.344	42.228	1.00	54.52	C
ATOM 10336	O	ALA F 405	33.105	18.438	41.007	1.00	53.84	O
ATOM 10337	CB	ALA F 405	31.189	19.310	43.551	1.00	53.84	C
ATOM 10338	N	PRO F 406	33.143	17.180	42.867	1.00	55.35	N
ATOM 10339	CA	PRO F 406	33.498	15.929	42.205	1.00	55.29	C
ATOM 10340	C	PRO F 406	32.368	15.684	41.225	1.00	55.76	C
ATOM 10341	O	PRO F 406	32.605	15.218	40.103	1.00	57.58	O
ATOM 10342	CB	PRO F 406	33.681	14.837	43.237	1.00	54.48	C
ATOM 10343	CG	PRO F 406	33.704	15.630	44.504	1.00	54.71	C
ATOM 10344	CD	PRO F 406	33.007	16.957	44.301	1.00	54.88	C
ATOM 10345	N	ASN F 407	31.169	16.060	41.651	1.00	55.15	N
ATOM 10346	CA	ASN F 407	30.035	15.895	40.755	1.00	55.97	C
ATOM 10347	C	ASN F 407	29.517	17.195	40.194	1.00	57.26	C
ATOM 10348	O	ASN F 407	28.311	17.208	39.894	1.00	58.96	O
ATOM 10349	CB	ASN F 407	28.911	15.202	41.515	1.00	55.94	C
ATOM 10350	CG	ASN F 407	28.276	16.110	42.537	1.00	55.68	C
ATOM 10351	OD1	ASN F 407	28.995	16.857	43.181	1.00	57.28	O
ATOM 10352	ND2	ASN F 407	26.963	16.028	42.632	1.00	56.05	N
ATOM 10353	N	LEU F 408	30.316	18.250	40.064	1.00	57.16	N
ATOM 10354	CA	LEU F 408	29.763	19.499	39.485	1.00	55.99	C
ATOM 10355	C	LEU F 408	30.968	20.067	38.746	1.00	56.37	C
ATOM 10356	O	LEU F 408	31.863	20.565	39.417	1.00	57.68	O
ATOM 10357	CB	LEU F 408	29.225	20.523	40.446	1.00	55.58	C
ATOM 10358	CG	LEU F 408	28.755	21.875	39.900	1.00	55.00	C
ATOM 10359	CD1	LEU F 408	27.830	21.740	38.707	1.00	54.25	C
ATOM 10360	CD2	LEU F 408	27.969	22.634	40.987	1.00	54.68	C
ATOM 10361	N	LEU F 409	30.970	19.890	37.442	1.00	56.60	N
ATOM 10362	CA	LEU F 409	32.144	20.327	36.665	1.00	55.96	C
ATOM 10363	C	LEU F 409	31.710	21.289	35.590	1.00	55.95	C
ATOM 10364	O	LEU F 409	31.388	20.869	34.495	1.00	57.17	O
ATOM 10365	CB	LEU F 409	32.791	19.058	36.164	1.00	55.32	C
ATOM 10366	CG	LEU F 409	33.947	18.979	35.213	1.00	55.70	C
ATOM 10367	CD1	LEU F 409	34.956	20.101	35.339	1.00	55.90	C
ATOM 10368	CD2	LEU F 409	34.675	17.653	35.488	1.00	56.47	C

ATOM 10369	N	LEU F 410	31.667	22.577	35.902	1.00	56.56	N
ATOM 10370	CA	LEU F 410	31.244	23.545	34.902	1.00	57.26	C
ATOM 10371	C	LEU F 410	32.413	23.805	33.970	1.00	59.35	C
ATOM 10372	O	LEU F 410	33.584	23.637	34.304	1.00	58.97	O
ATOM 10373	CB	LEU F 410	30.668	24.837	35.464	1.00	55.77	C
ATOM 10374	CG	LEU F 410	29.667	24.528	36.601	1.00	54.83	C
ATOM 10375	CD1	LEU F 410	29.205	25.798	37.278	1.00	55.52	C
ATOM 10376	CD2	LEU F 410	28.505	23.766	36.001	1.00	54.77	C
ATOM 10377	N	ASP F 411	31.952	24.202	32.790	1.00	62.19	N
ATOM 10378	CA	ASP F 411	32.831	24.505	31.661	1.00	64.49	C
ATOM 10379	C	ASP F 411	32.795	25.997	31.412	1.00	64.48	C
ATOM 10380	O	ASP F 411	31.761	26.647	31.652	1.00	64.26	O
ATOM 10381	CB	ASP F 411	32.228	23.669	30.538	1.00	68.33	C
ATOM 10382	CG	ASP F 411	32.391	24.299	29.173	1.00	72.19	C
ATOM 10383	OD1	ASP F 411	31.696	25.321	28.932	1.00	73.43	O
ATOM 10384	OD2	ASP F 411	33.220	23.750	28.392	1.00	74.63	O
ATOM 10385	N	ARG F 412	33.886	26.578	30.919	1.00	64.89	N
ATOM 10386	CA	ARG F 412	33.906	28.019	30.696	1.00	65.23	C
ATOM 10387	C	ARG F 412	32.569	28.596	30.266	1.00	65.96	C
ATOM 10388	O	ARG F 412	31.925	29.407	30.917	1.00	65.50	O
ATOM 10389	CB	ARG F 412	34.982	28.444	29.689	1.00	64.44	C
ATOM 10390	CG	ARG F 412	34.710	29.873	29.244	1.00	64.57	C
ATOM 10391	CD	ARG F 412	35.927	30.537	28.674	1.00	65.66	C
ATOM 10392	NE	ARG F 412	35.763	31.981	28.559	1.00	66.61	N
ATOM 10393	CZ	ARG F 412	34.857	32.600	27.815	1.00	66.99	C
ATOM 10394	NH1	ARG F 412	33.978	31.914	27.094	1.00	66.89	N
ATOM 10395	NH2	ARG F 412	34.842	33.932	27.799	1.00	67.45	N
ATOM 10396	N	ASN F 413	32.083	28.198	29.112	1.00	68.07	N
ATOM 10397	CA	ASN F 413	30.830	28.695	28.572	1.00	70.73	C
ATOM 10398	C	ASN F 413	29.668	28.640	29.522	1.00	70.13	C
ATOM 10399	O	ASN F 413	28.805	29.535	29.411	1.00	70.65	O
ATOM 10400	CB	ASN F 413	30.525	27.900	27.282	1.00	74.76	C
ATOM 10401	CG	ASN F 413	31.789	28.095	26.420	1.00	78.76	C
ATOM 10402	OD1	ASN F 413	32.005	29.230	25.952	1.00	80.28	O
ATOM 10403	ND2	ASN F 413	32.560	27.007	26.279	1.00	79.96	N
ATOM 10404	N	GLN F 414	29.592	27.702	30.462	1.00	68.79	N
ATOM 10405	CA	GLN F 414	28.458	27.658	31.391	1.00	68.63	C
ATOM 10406	C	GLN F 414	28.438	28.884	32.296	1.00	67.98	C
ATOM 10407	O	GLN F 414	27.433	29.292	32.874	1.00	66.88	O
ATOM 10408	CB	GLN F 414	28.463	26.359	32.177	1.00	69.46	C
ATOM 10409	CG	GLN F 414	28.856	25.169	31.307	1.00	70.47	C
ATOM 10410	CD	GLN F 414	28.369	23.893	31.965	1.00	71.50	C
ATOM 10411	OE1	GLN F 414	29.171	23.019	32.299	1.00	71.94	O
ATOM 10412	NE2	GLN F 414	27.044	23.864	32.118	1.00	72.39	N
ATOM 10413	N	GLY F 415	29.596	29.527	32.400	1.00	67.80	N

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ATOM 10414	CA	GLY F 415	29.746	30.770	33.128	1.00	68.11	C
ATOM 10415	C	GLY F 415	28.777	31.750	32.470	1.00	68.30	C
ATOM 10416	O	GLY F 415	28.072	32.412	33.224	1.00	68.90	O
ATOM 10417	N	LYS F 416	28.604	31.849	31.163	1.00	69.39	N
ATOM 10418	CA	LYS F 416	27.655	32.763	30.541	1.00	70.28	C
ATOM 10419	C	LYS F 416	26.246	32.690	31.106	1.00	69.50	C
ATOM 10420	O	LYS F 416	25.479	33.656	30.958	1.00	69.84	O
ATOM 10421	CB	LYS F 416	27.606	32.594	29.019	1.00	71.83	C
ATOM 10422	CG	LYS F 416	28.968	32.338	28.420	1.00	75.31	C
ATOM 10423	CD	LYS F 416	29.289	33.295	27.285	1.00	78.73	C
ATOM 10424	CE	LYS F 416	29.356	32.551	25.946	1.00	81.02	C
ATOM 10425	NZ	LYS F 416	30.705	31.935	25.732	1.00	82.82	N
ATOM 10426	N	CYS F 417	25.830	31.622	31.772	1.00	68.21	N
ATOM 10427	CA	CYS F 417	24.503	31.540	32.358	1.00	67.61	C
ATOM 10428	C	CYS F 417	24.285	32.661	33.350	1.00	65.76	C
ATOM 10429	O	CYS F 417	23.207	33.256	33.316	1.00	66.11	O
ATOM 10430	CB	CYS F 417	24.329	30.165	32.985	1.00	70.15	C
ATOM 10431	SG	CYS F 417	24.382	28.881	31.683	1.00	77.76	S
ATOM 10432	N	VAL F 418	25.241	33.005	34.210	1.00	63.55	N
ATOM 10433	CA	VAL F 418	25.081	34.098	35.147	1.00	61.32	C
ATOM 10434	C	VAL F 418	25.746	35.372	34.665	1.00	61.63	C
ATOM 10435	O	VAL F 418	26.850	35.314	34.165	1.00	61.60	O
ATOM 10436	CB	VAL F 418	25.650	33.726	36.514	1.00	60.64	C
ATOM 10437	CG1	VAL F 418	25.593	34.885	37.508	1.00	60.21	C
ATOM 10438	CG2	VAL F 418	24.857	32.547	37.066	1.00	60.33	C
ATOM 10439	N	GLU F 419	25.098	36.508	34.813	1.00	63.38	N
ATOM 10440	CA	GLU F 419	25.600	37.807	34.409	1.00	65.89	C
ATOM 10441	C	GLU F 419	26.960	38.096	34.988	1.00	65.05	C
ATOM 10442	O	GLU F 419	27.258	37.846	36.153	1.00	65.71	O
ATOM 10443	CB	GLU F 419	24.595	38.828	34.919	1.00	70.65	C
ATOM 10444	CG	GLU F 419	24.275	39.972	33.979	1.00	77.55	C
ATOM 10445	CD	GLU F 419	23.670	41.169	34.709	1.00	81.92	C
ATOM 10446	OE1	GLU F 419	22.879	40.963	35.681	1.00	84.01	O
ATOM 10447	OE2	GLU F 419	23.980	42.334	34.320	1.00	84.04	O
ATOM 10448	N	GLY F 420	27.891	38.587	34.199	1.00	65.03	N
ATOM 10449	CA	GLY F 420	29.231	38.899	34.651	1.00	65.49	C
ATOM 10450	C	GLY F 420	30.119	37.823	35.225	1.00	64.82	C
ATOM 10451	O	GLY F 420	31.218	38.147	35.713	1.00	65.72	O
ATOM 10452	N	MET F 421	29.771	36.558	35.173	1.00	64.00	N
ATOM 10453	CA	MET F 421	30.550	35.454	35.683	1.00	63.00	C
ATOM 10454	C	MET F 421	31.674	34.951	34.797	1.00	61.94	C
ATOM 10455	O	MET F 421	32.661	34.408	35.287	1.00	62.44	O
ATOM 10456	CB	MET F 421	29.596	34.239	35.805	1.00	63.18	C
ATOM 10457	CG	MET F 421	29.044	34.224	37.212	1.00	64.57	C
ATOM 10458	SD	MET F 421	30.025	33.019	38.110	1.00	66.08	S

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ATOM 10459	CE MET F 421	29.018 31.565 37.788 1.00 66.03	C
ATOM 10460	N VAL F 422	31.527 35.070 33.490 1.00 60.71	N
ATOM 10461	CA VAL F 422	32.525 34.592 32.566 1.00 60.20	C
ATOM 10462	C VAL F 422	33.905 35.167 32.837 1.00 59.38	C
ATOM 10463	O VAL F 422	34.851 34.392 32.683 1.00 59.80	O
ATOM 10464	CB VAL F 422	32.263 34.966 31.088 1.00 61.22	C
ATOM 10465	CG1 VAL F 422	32.401 33.709 30.248 1.00 62.09	C
ATOM 10466	CG2 VAL F 422	30.899 35.598 30.914 1.00 62.29	C
ATOM 10467	N GLU F 423	34.018 36.448 33.170 1.00 58.36	N
ATOM 10468	CA GLU F 423	35.329 37.030 33.410 1.00 58.15	C
ATOM 10469	C GLU F 423	35.948 36.412 34.654 1.00 55.71	C
ATOM 10470	O GLU F 423	37.152 36.166 34.665 1.00 56.58	O
ATOM 10471	CB GLU F 423	35.309 38.524 33.613 1.00 62.78	C
ATOM 10472	CG GLU F 423	34.629 39.272 32.485 1.00 69.47	C
ATOM 10473	CD GLU F 423	33.123 39.329 32.718 1.00 73.86	C
ATOM 10474	OE1 GLU F 423	32.397 38.333 32.475 1.00 74.70	O
ATOM 10475	OE2 GLU F 423	32.674 40.423 33.171 1.00 77.46	O
ATOM 10476	N ILE F 424	35.112 36.171 35.662 1.00 51.62	N
ATOM 10477	CA ILE F 424	35.616 35.542 36.876 1.00 48.04	C
ATOM 10478	C ILE F 424	36.031 34.137 36.507 1.00 47.89	C
ATOM 10479	O ILE F 424	37.163 33.731 36.816 1.00 49.20	O
ATOM 10480	CB ILE F 424	34.548 35.642 37.941 1.00 47.10	C
ATOM 10481	CG1 ILE F 424	34.390 37.143 38.225 1.00 46.33	C
ATOM 10482	CG2 ILE F 424	34.879 34.872 39.201 1.00 46.61	C
ATOM 10483	CD1 ILE F 424	33.229 37.383 39.174 1.00 47.46	C
ATOM 10484	N PHE F 425	35.222 33.408 35.755 1.00 46.83	N
ATOM 10485	CA PHE F 425	35.619 32.071 35.322 1.00 48.22	C
ATOM 10486	C PHE F 425	36.937 32.135 34.556 1.00 49.91	C
ATOM 10487	O PHE F 425	37.853 31.316 34.702 1.00 51.00	O
ATOM 10488	CB PHE F 425	34.539 31.451 34.440 1.00 48.12	C
ATOM 10489	CG PHE F 425	33.475 30.702 35.185 1.00 49.40	C
ATOM 10490	CD1 PHE F 425	33.123 31.077 36.486 1.00 50.06	C
ATOM 10491	CD2 PHE F 425	32.821 29.624 34.612 1.00 49.23	C
ATOM 10492	CE1 PHE F 425	32.162 30.412 37.209 1.00 49.68	C
ATOM 10493	CE2 PHE F 425	31.845 28.954 35.331 1.00 50.18	C
ATOM 10494	CZ PHE F 425	31.508 29.334 36.631 1.00 50.15	C
ATOM 10495	N ASP F 426	37.069 33.148 33.702 1.00 50.26	N
ATOM 10496	CA ASP F 426	38.270 33.298 32.906 1.00 50.96	C
ATOM 10497	C ASP F 426	39.485 33.438 33.783 1.00 50.47	C
ATOM 10498	O ASP F 426	40.446 32.667 33.607 1.00 51.65	O
ATOM 10499	CB ASP F 426	38.044 34.413 31.894 1.00 53.65	C
ATOM 10500	CG ASP F 426	37.439 33.833 30.617 1.00 56.12	C
ATOM 10501	OD1 ASP F 426	37.484 32.592 30.431 1.00 58.15	O
ATOM 10502	OD2 ASP F 426	36.916 34.582 29.774 1.00 57.16	O
ATOM 10503	N MET F 427	39.441 34.345 34.750 1.00 48.52	N

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ATOM 10504	CA	MET F 427	40.586	34.508	35.657	1.00	46.90	C
ATOM 10505	C	MET F 427	40.857	33.207	36.403	1.00	45.52	C
ATOM 10506	O	MET F 427	41.990	32.747	36.614	1.00	44.26	O
ATOM 10507	CB	MET F 427	40.243	35.659	36.593	1.00	47.63	C
ATOM 10508	CG	MET F 427	40.163	36.986	35.836	1.00	48.76	C
ATOM 10509	SD	MET F 427	39.866	38.355	36.971	1.00	51.55	S
ATOM 10510	CE	MET F 427	38.139	38.222	37.326	1.00	49.51	C
ATOM 10511	N	LEU F 428	39.755	32.543	36.808	1.00	43.33	N
ATOM 10512	CA	LEU F 428	39.933	31.284	37.518	1.00	42.21	C
ATOM 10513	C	LEU F 428	40.679	30.313	36.628	1.00	43.27	C
ATOM 10514	O	LEU F 428	41.685	29.742	37.071	1.00	44.04	O
ATOM 10515	CB	LEU F 428	38.603	30.737	37.999	1.00	40.78	C
ATOM 10516	CG	LEU F 428	38.010	31.542	39.159	1.00	40.48	C
ATOM 10517	CD1	LEU F 428	36.570	31.132	39.363	1.00	40.58	C
ATOM 10518	CD2	LEU F 428	38.790	31.334	40.446	1.00	40.90	C
ATOM 10519	N	LEU F 429	40.229	30.165	35.373	1.00	43.15	N
ATOM 10520	CA	LEU F 429	40.881	29.212	34.467	1.00	41.90	C
ATOM 10521	C	LEU F 429	42.337	29.526	34.262	1.00	42.47	C
ATOM 10522	O	LEU F 429	43.205	28.654	34.401	1.00	44.16	O
ATOM 10523	CB	LEU F 429	40.094	29.096	33.184	1.00	41.71	C
ATOM 10524	CG	LEU F 429	38.733	28.397	33.360	1.00	43.05	C
ATOM 10525	CD1	LEU F 429	37.812	28.671	32.178	1.00	43.57	C
ATOM 10526	CD2	LEU F 429	38.859	26.908	33.606	1.00	42.12	C
ATOM 10527	N	ALA F 430	42.669	30.773	33.988	1.00	42.24	N
ATOM 10528	CA	ALA F 430	44.058	31.159	33.815	1.00	42.75	C
ATOM 10529	C	ALA F 430	44.897	30.803	35.037	1.00	45.07	C
ATOM 10530	O	ALA F 430	46.075	30.391	34.916	1.00	46.71	O
ATOM 10531	CB	ALA F 430	44.065	32.663	33.669	1.00	43.28	C
ATOM 10532	N	THR F 431	44.355	30.955	36.258	1.00	44.77	N
ATOM 10533	CA	THR F 431	45.170	30.623	37.427	1.00	44.31	C
ATOM 10534	C	THR F 431	45.397	29.124	37.461	1.00	44.45	C
ATOM 10535	O	THR F 431	46.471	28.610	37.767	1.00	44.16	O
ATOM 10536	CB	THR F 431	44.451	30.999	38.735	1.00	44.07	C
ATOM 10537	OG1	THR F 431	43.999	32.353	38.616	1.00	43.94	O
ATOM 10538	CG2	THR F 431	45.396	30.809	39.903	1.00	43.20	C
ATOM 10539	N	SER F 432	44.289	28.452	37.131	1.00	45.50	N
ATOM 10540	CA	SER F 432	44.289	26.983	37.159	1.00	47.34	C
ATOM 10541	C	SER F 432	45.353	26.431	36.223	1.00	47.54	C
ATOM 10542	O	SER F 432	46.118	25.497	36.477	1.00	46.82	O
ATOM 10543	CB	SER F 432	42.903	26.432	36.839	1.00	47.98	C
ATOM 10544	OG	SER F 432	43.039	25.012	36.825	1.00	49.24	O
ATOM 10545	N	SER F 433	45.402	27.092	35.084	1.00	48.47	N
ATOM 10546	CA	SER F 433	46.357	26.804	34.038	1.00	50.63	C
ATOM 10547	C	SER F 433	47.786	27.084	34.459	1.00	51.26	C
ATOM 10548	O	SER F 433	48.760	26.362	34.273	1.00	50.75	O

ATOM 10549 CB SER F 433	45.927 27.819 32.961 1.00 52.15	C
ATOM 10550 OG SER F 433	46.543 27.388 31.775 1.00 56.38	O
ATOM 10551 N ARG F 434	48.003 28.226 35.129 1.00 52.73	N
ATOM 10552 CA ARG F 434	49.352 28.574 35.573 1.00 53.56	C
ATOM 10553 C ARG F 434	49.766 27.531 36.596 1.00 53.48	C
ATOM 10554 O ARG F 434	50.943 27.197 36.659 1.00 52.54	O
ATOM 10555 CB ARG F 434	49.461 30.024 36.079 1.00 54.50	C
ATOM 10556 CG ARG F 434	50.803 30.289 36.753 1.00 56.62	C
ATOM 10557 CD ARG F 434	51.502 31.575 36.383 1.00 58.78	C
ATOM 10558 NE ARG F 434	52.930 31.615 36.772 1.00 60.07	N
ATOM 10559 CZ ARG F 434	53.828 30.921 36.059 1.00 61.43	C
ATOM 10560 NH1 ARG F 434	53.372 30.218 35.016 1.00 62.66	N
ATOM 10561 NH2 ARG F 434	55.133 30.877 36.301 1.00 61.47	N
ATOM 10562 N PHE F 435	48.813 27.041 37.408 1.00 54.96	N
ATOM 10563 CA PHE F 435	49.177 26.036 38.411 1.00 57.18	C
ATOM 10564 C PHE F 435	49.608 24.749 37.710 1.00 58.45	C
ATOM 10565 O PHE F 435	50.558 24.106 38.138 1.00 57.74	O
ATOM 10566 CB PHE F 435	48.105 25.772 39.456 1.00 56.49	C
ATOM 10567 CG PHE F 435	48.034 26.742 40.598 1.00 55.75	C
ATOM 10568 CD1 PHE F 435	49.005 27.691 40.851 1.00 55.39	C
ATOM 10569 CD2 PHE F 435	46.951 26.703 41.455 1.00 55.41	C
ATOM 10570 CE1 PHE F 435	48.912 28.573 41.901 1.00 54.76	C
ATOM 10571 CE2 PHE F 435	46.816 27.574 42.511 1.00 54.69	C
ATOM 10572 CZ PHE F 435	47.810 28.513 42.723 1.00 54.93	C
ATOM 10573 N ARG F 436	48.899 24.426 36.635 1.00 61.16	N
ATOM 10574 CA ARG F 436	49.230 23.260 35.824 1.00 63.91	C
ATOM 10575 C ARG F 436	50.642 23.428 35.266 1.00 64.90	C
ATOM 10576 O ARG F 436	51.525 22.585 35.442 1.00 65.68	O
ATOM 10577 CB ARG F 436	48.216 23.129 34.681 1.00 65.01	C
ATOM 10578 CG ARG F 436	47.958 21.689 34.273 1.00 67.19	C
ATOM 10579 CD ARG F 436	47.019 21.598 33.083 1.00 69.08	C
ATOM 10580 NE ARG F 436	45.716 22.192 33.394 1.00 71.52	N
ATOM 10581 CZ ARG F 436	45.232 23.266 32.760 1.00 73.35	C
ATOM 10582 NH1 ARG F 436	45.943 23.850 31.781 1.00 73.57	N
ATOM 10583 NH2 ARG F 436	44.030 23.762 33.093 1.00 73.47	N
ATOM 10584 N MET F 437	50.913 24.541 34.598 1.00 66.22	N
ATOM 10585 CA MET F 437	52.220 24.784 34.037 1.00 68.63	C
ATOM 10586 C MET F 437	53.342 24.693 35.035 1.00 66.71	C
ATOM 10587 O MET F 437	54.396 24.182 34.701 1.00 68.13	O
ATOM 10588 CB MET F 437	52.303 26.168 33.416 1.00 74.65	C
ATOM 10589 CG MET F 437	51.465 26.344 32.150 1.00 81.16	C
ATOM 10590 SD MET F 437	52.076 27.810 31.265 1.00 87.98	S
ATOM 10591 CE MET F 437	51.703 29.133 32.437 1.00 86.12	C
ATOM 10592 N MET F 438	53.225 25.157 36.249 1.00 65.31	N
ATOM 10593 CA MET F 438	54.284 25.117 37.241 1.00 64.01	C

ATOM 10594	C	MET F 438	54.323	23.791	37.986	1.00	62.79	C
ATOM 10595	O	MET F 438	55.142	23.592	38.867	1.00	61.09	O
ATOM 10596	CB	MET F 438	53.990	26.137	38.332	1.00	64.74	C
ATOM 10597	CG	MET F 438	53.772	27.547	37.812	1.00	64.81	C
ATOM 10598	SD	MET F 438	54.135	28.703	39.127	1.00	67.15	S
ATOM 10599	CE	MET F 438	55.311	27.925	40.183	1.00	66.27	C
ATOM 10600	N	ASN F 439	53.346	22.974	37.644	1.00	63.21	N
ATOM 10601	CA	ASN F 439	53.225	21.673	38.262	1.00	64.74	C
ATOM 10602	C	ASN F 439	53.320	21.799	39.773	1.00	63.07	C
ATOM 10603	O	ASN F 439	54.190	21.319	40.489	1.00	62.09	O
ATOM 10604	CB	ASN F 439	54.353	20.818	37.695	1.00	69.48	C
ATOM 10605	CG	ASN F 439	54.162	19.398	38.206	1.00	73.82	C
ATOM 10606	OD1	ASN F 439	55.154	18.664	38.273	1.00	76.98	O
ATOM 10607	ND2	ASN F 439	52.924	19.053	38.568	1.00	75.36	N
ATOM 10608	N	LEU F 440	52.330	22.520	40.283	1.00	61.61	N
ATOM 10609	CA	LEU F 440	52.194	22.815	41.694	1.00	59.97	C
ATOM 10610	C	LEU F 440	51.887	21.539	42.469	1.00	60.37	C
ATOM 10611	O	LEU F 440	50.964	20.775	42.194	1.00	60.25	O
ATOM 10612	CB	LEU F 440	51.075	23.839	41.882	1.00	58.78	C
ATOM 10613	CG	LEU F 440	50.694	24.208	43.313	1.00	57.87	C
ATOM 10614	CD1	LEU F 440	51.794	25.026	43.970	1.00	56.53	C
ATOM 10615	CD2	LEU F 440	49.366	24.945	43.317	1.00	57.72	C
ATOM 10616	N	GLN F 441	52.708	21.324	43.477	1.00	60.52	N
ATOM 10617	CA	GLN F 441	52.558	20.194	44.348	1.00	61.60	C
ATOM 10618	C	GLN F 441	51.530	20.432	45.431	1.00	61.09	C
ATOM 10619	O	GLN F 441	51.343	21.567	45.857	1.00	62.04	O
ATOM 10620	CB	GLN F 441	53.920	20.060	45.068	1.00	64.19	C
ATOM 10621	CG	GLN F 441	55.044	19.592	44.172	1.00	67.64	C
ATOM 10622	CD	GLN F 441	54.612	18.553	43.142	1.00	69.80	C
ATOM 10623	OE1	GLN F 441	54.443	17.386	43.525	1.00	71.77	O
ATOM 10624	NE2	GLN F 441	54.418	18.950	41.885	1.00	69.81	N
ATOM 10625	N	GLY F 442	50.917	19.379	45.953	1.00	60.60	N
ATOM 10626	CA	GLY F 442	49.963	19.503	47.043	1.00	58.41	C
ATOM 10627	C	GLY F 442	50.664	20.048	48.283	1.00	57.04	C
ATOM 10628	O	GLY F 442	50.017	20.830	48.990	1.00	57.25	O
ATOM 10629	N	GLU F 443	51.920	19.742	48.570	1.00	55.94	N
ATOM 10630	CA	GLU F 443	52.532	20.303	49.768	1.00	58.15	C
ATOM 10631	C	GLU F 443	52.645	21.826	49.592	1.00	56.01	C
ATOM 10632	O	GLU F 443	52.528	22.584	50.556	1.00	55.68	O
ATOM 10633	CB	GLU F 443	53.896	19.797	50.198	1.00	62.35	C
ATOM 10634	CG	GLU F 443	54.179	18.318	50.317	1.00	66.50	C
ATOM 10635	CD	GLU F 443	53.709	17.564	49.077	1.00	69.75	C
ATOM 10636	OE1	GLU F 443	53.997	17.966	47.916	1.00	70.12	O
ATOM 10637	OE2	GLU F 443	52.996	16.549	49.342	1.00	72.24	O
ATOM 10638	N	GLU F 444	52.894	22.219	48.348	1.00	53.52	N

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ATOM 10639	CA	GLU F 444	52.988	23.648	48.033	1.00	51.41	C
ATOM 10640	C	GLU F 444	51.610	24.283	48.190	1.00	49.54	C
ATOM 10641	O	GLU F 444	51.443	25.304	48.870	1.00	49.51	O
ATOM 10642	CB	GLU F 444	53.481	23.811	46.604	1.00	51.00	C
ATOM 10643	CG	GLU F 444	54.985	23.559	46.525	1.00	50.83	C
ATOM 10644	CD	GLU F 444	55.461	23.611	45.082	1.00	50.64	C
ATOM 10645	OE1	GLU F 444	54.717	23.092	44.219	1.00	50.76	O
ATOM 10646	OE2	GLU F 444	56.559	24.173	44.898	1.00	49.61	O
ATOM 10647	N	PHE F 445	50.623	23.617	47.583	1.00	46.95	N
ATOM 10648	CA	PHE F 445	49.252	24.097	47.690	1.00	46.23	C
ATOM 10649	C	PHE F 445	48.842	24.458	49.124	1.00	47.00	C
ATOM 10650	O	PHE F 445	48.378	25.546	49.478	1.00	47.60	O
ATOM 10651	CB	PHE F 445	48.288	23.052	47.176	1.00	43.41	C
ATOM 10652	CG	PHE F 445	46.861	23.372	47.452	1.00	42.77	C
ATOM 10653	CD1	PHE F 445	46.282	24.521	46.973	1.00	43.64	C
ATOM 10654	CD2	PHE F 445	46.091	22.512	48.186	1.00	43.76	C
ATOM 10655	CE1	PHE F 445	44.951	24.813	47.212	1.00	44.82	C
ATOM 10656	CE2	PHE F 445	44.748	22.772	48.458	1.00	44.81	C
ATOM 10657	CZ	PHE F 445	44.179	23.932	47.962	1.00	45.27	C
ATOM 10658	N	VAL F 446	49.023	23.507	50.012	1.00	46.82	N
ATOM 10659	CA	VAL F 446	48.660	23.616	51.425	1.00	46.58	C
ATOM 10660	C	VAL F 446	49.366	24.778	52.074	1.00	47.18	C
ATOM 10661	O	VAL F 446	48.814	25.462	52.965	1.00	47.41	O
ATOM 10662	CB	VAL F 446	48.850	22.180	51.966	1.00	46.32	C
ATOM 10663	CG1	VAL F 446	49.788	21.987	53.122	1.00	45.59	C
ATOM 10664	CG2	VAL F 446	47.474	21.582	52.273	1.00	46.15	C
ATOM 10665	N	CYS F 447	50.600	25.080	51.675	1.00	46.65	N
ATOM 10666	CA	CYS F 447	51.297	26.197	52.302	1.00	48.27	C
ATOM 10667	C	CYS F 447	50.776	27.548	51.838	1.00	49.24	C
ATOM 10668	O	CYS F 447	50.649	28.497	52.611	1.00	49.40	O
ATOM 10669	CB	CYS F 447	52.764	26.117	51.886	1.00	50.10	C
ATOM 10670	SG	CYS F 447	53.656	24.982	52.943	1.00	53.85	S
ATOM 10671	N	LEU F 448	50.490	27.658	50.525	1.00	48.80	N
ATOM 10672	CA	LEU F 448	49.967	28.898	49.961	1.00	46.96	C
ATOM 10673	C	LEU F 448	48.634	29.240	50.623	1.00	46.33	C
ATOM 10674	O	LEU F 448	48.356	30.354	51.071	1.00	47.24	O
ATOM 10675	CB	LEU F 448	49.753	28.756	48.470	1.00	46.50	C
ATOM 10676	CG	LEU F 448	50.982	28.820	47.584	1.00	46.81	C
ATOM 10677	CD1	LEU F 448	50.525	28.569	46.148	1.00	48.16	C
ATOM 10678	CD2	LEU F 448	51.731	30.124	47.684	1.00	45.78	C
ATOM 10679	N	LYS F 449	47.782	28.221	50.726	1.00	44.50	N
ATOM 10680	CA	LYS F 449	46.492	28.407	51.367	1.00	43.31	C
ATOM 10681	C	LYS F 449	46.691	28.978	52.754	1.00	42.85	C
ATOM 10682	O	LYS F 449	45.996	29.937	53.119	1.00	43.25	O
ATOM 10683	CB	LYS F 449	45.749	27.103	51.327	1.00	43.90	C

ATOM 10684	CG	LYS F 449	44.247	27.263	51.191	1.00	44.78	C
ATOM 10685	CD	LYS F 449	43.613	26.159	51.990	1.00	47.21	C
ATOM 10686	CE	LYS F 449	43.433	24.850	51.206	1.00	47.74	C
ATOM 10687	NZ	LYS F 449	42.589	24.020	52.170	1.00	50.18	N
ATOM 10688	N	SER F 450	47.639	28.500	53.553	1.00	42.46	N
ATOM 10689	CA	SER F 450	47.814	29.119	54.875	1.00	42.90	C
ATOM 10690	C	SER F 450	48.383	30.521	54.786	1.00	42.09	C
ATOM 10691	O	SER F 450	48.029	31.365	55.595	1.00	43.54	O
ATOM 10692	CB	SER F 450	48.795	28.347	55.761	1.00	43.59	C
ATOM 10693	OG	SER F 450	48.248	27.029	55.787	1.00	47.77	O
ATOM 10694	N	ILE F 451	49.269	30.781	53.834	1.00	40.12	N
ATOM 10695	CA	ILE F 451	49.820	32.118	53.722	1.00	39.28	C
ATOM 10696	C	ILE F 451	48.634	33.042	53.469	1.00	39.77	C
ATOM 10697	O	ILE F 451	48.568	34.114	54.089	1.00	39.70	O
ATOM 10698	CB	ILE F 451	50.814	32.179	52.553	1.00	40.03	C
ATOM 10699	CG1	ILE F 451	52.019	31.314	52.972	1.00	40.96	C
ATOM 10700	CG2	ILE F 451	51.168	33.605	52.181	1.00	37.43	C
ATOM 10701	CD1	ILE F 451	53.226	31.501	52.067	1.00	42.25	C
ATOM 10702	N	ILE F 452	47.705	32.616	52.586	1.00	38.84	N
ATOM 10703	CA	ILE F 452	46.548	33.463	52.283	1.00	37.28	C
ATOM 10704	C	ILE F 452	45.768	33.774	53.550	1.00	38.23	C
ATOM 10705	O	ILE F 452	45.435	34.904	53.888	1.00	38.53	O
ATOM 10706	CB	ILE F 452	45.621	32.826	51.235	1.00	35.26	C
ATOM 10707	CG1	ILE F 452	46.372	32.603	49.939	1.00	34.97	C
ATOM 10708	CG2	ILE F 452	44.378	33.683	51.037	1.00	34.63	C
ATOM 10709	CD1	ILE F 452	45.603	32.333	48.672	1.00	34.25	C
ATOM 10710	N	LEU F 453	45.448	32.766	54.353	1.00	39.02	N
ATOM 10711	CA	LEU F 453	44.689	32.962	55.568	1.00	38.90	C
ATOM 10712	C	LEU F 453	45.422	33.935	56.465	1.00	40.48	C
ATOM 10713	O	LEU F 453	44.764	34.756	57.094	1.00	41.71	O
ATOM 10714	CB	LEU F 453	44.488	31.644	56.342	1.00	37.90	C
ATOM 10715	CG	LEU F 453	43.878	31.797	57.744	1.00	35.70	C
ATOM 10716	CD1	LEU F 453	42.461	32.331	57.605	1.00	34.11	C
ATOM 10717	CD2	LEU F 453	43.883	30.487	58.503	1.00	34.42	C
ATOM 10718	N	LEU F 454	46.738	33.818	56.596	1.00	41.92	N
ATOM 10719	CA	LEU F 454	47.456	34.685	57.496	1.00	43.45	C
ATOM 10720	C	LEU F 454	47.851	36.042	56.967	1.00	45.28	C
ATOM 10721	O	LEU F 454	47.950	36.948	57.803	1.00	46.67	O
ATOM 10722	CB	LEU F 454	48.756	34.016	57.960	1.00	42.96	C
ATOM 10723	CG	LEU F 454	48.483	32.896	58.962	1.00	43.99	C
ATOM 10724	CD1	LEU F 454	49.669	31.956	58.989	1.00	44.83	C
ATOM 10725	CD2	LEU F 454	48.275	33.471	60.349	1.00	44.52	C
ATOM 10726	N	ASN F 455	48.106	36.198	55.670	1.00	46.34	N
ATOM 10727	CA	ASN F 455	48.575	37.509	55.222	1.00	46.38	C
ATOM 10728	C	ASN F 455	47.492	38.408	54.733	1.00	48.11	C

ATOM 10729 O ASN F 455	47.734 39.605 54.682 1.00 49.90	O
ATOM 10730 CB ASN F 455	49.624 37.321 54.146 1.00 45.67	C
ATOM 10731 CG ASN F 455	50.010 38.492 53.275 1.00 45.59	C
ATOM 10732 OD1 ASN F 455	49.594 38.544 52.100 1.00 44.75	O
ATOM 10733 ND2 ASN F 455	50.796 39.417 53.841 1.00 45.05	N
ATOM 10734 N SER F 456	46.348 37.911 54.357 1.00 51.38	N
ATOM 10735 CA SER F 456	45.346 38.823 53.799 1.00 54.60	C
ATOM 10736 C SER F 456	44.854 39.879 54.748 1.00 56.87	C
ATOM 10737 O SER F 456	44.860 41.068 54.436 1.00 58.87	O
ATOM 10738 CB SER F 456	44.239 37.991 53.143 1.00 53.97	C
ATOM 10739 OG SER F 456	44.642 37.635 51.834 1.00 52.06	O
ATOM 10740 N GLY F 457	44.415 39.576 55.940 1.00 59.59	N
ATOM 10741 CA GLY F 457	43.914 40.591 56.840 1.00 63.22	C
ATOM 10742 C GLY F 457	44.922 41.173 57.791 1.00 65.51	C
ATOM 10743 O GLY F 457	44.479 41.879 58.700 1.00 66.13	O
ATOM 10744 N VAL F 458	46.200 40.899 57.620 1.00 68.23	N
ATOM 10745 CA VAL F 458	47.211 41.410 58.533 1.00 70.95	C
ATOM 10746 C VAL F 458	47.319 42.913 58.599 1.00 74.25	C
ATOM 10747 O VAL F 458	47.437 43.430 59.722 1.00 74.44	O
ATOM 10748 CB VAL F 458	48.540 40.677 58.307 1.00 69.60	C
ATOM 10749 CG1 VAL F 458	49.274 41.134 57.085 1.00 68.59	C
ATOM 10750 CG2 VAL F 458	49.405 40.854 59.548 1.00 70.49	C
ATOM 10751 N TYR F 459	47.194 43.714 57.562 1.00 78.93	N
ATOM 10752 CA TYR F 459	47.270 45.165 57.589 1.00 83.53	C
ATOM 10753 C TYR F 459	45.981 45.821 58.041 1.00 85.83	C
ATOM 10754 O TYR F 459	45.773 47.004 57.768 1.00 86.84	O
ATOM 10755 CB TYR F 459	47.610 45.765 56.183 1.00 85.17	C
ATOM 10756 CG TYR F 459	48.830 45.018 55.679 1.00 87.46	C
ATOM 10757 CD1 TYR F 459	48.663 43.825 54.983 1.00 88.40	C
ATOM 10758 CD2 TYR F 459	50.119 45.455 55.928 1.00 88.55	C
ATOM 10759 CE1 TYR F 459	49.756 43.108 54.544 1.00 89.73	C
ATOM 10760 CE2 TYR F 459	51.229 44.742 55.494 1.00 89.67	C
ATOM 10761 CZ TYR F 459	51.044 43.562 54.800 1.00 90.34	C
ATOM 10762 OH TYR F 459	52.112 42.812 54.349 1.00 90.22	O
ATOM 10763 N THR F 460	45.080 45.116 58.698 1.00 88.43	N
ATOM 10764 CA THR F 460	43.806 45.668 59.117 1.00 90.87	C
ATOM 10765 C THR F 460	43.373 45.094 60.454 1.00 92.52	C
ATOM 10766 O THR F 460	42.202 44.767 60.650 1.00 93.45	O
ATOM 10767 CB THR F 460	42.728 45.356 58.062 1.00 91.17	C
ATOM 10768 OG1 THR F 460	43.188 44.550 56.977 1.00 91.48	O
ATOM 10769 CG2 THR F 460	42.249 46.666 57.454 1.00 92.09	C
ATOM 10770 N PHE F 461	44.326 44.983 61.375 1.00 94.30	N
ATOM 10771 CA PHE F 461	44.007 44.400 62.671 1.00 95.51	C
ATOM 10772 C PHE F 461	43.071 45.149 63.600 1.00 97.02	C
ATOM 10773 O PHE F 461	42.202 44.463 64.198 1.00 98.67	O

ATOM 10774	CB PHE F 461	45.304 43.939 63.383 1.00 94.47	C
ATOM 10775	CG PHE F 461	45.403 42.449 63.144 1.00 93.47	C
ATOM 10776	CD1 PHE F 461	44.247 41.711 62.949 1.00 93.23	C
ATOM 10777	CD2 PHE F 461	46.612 41.809 63.106 1.00 93.27	C
ATOM 10778	CE1 PHE F 461	44.292 40.364 62.725 1.00 93.64	C
ATOM 10779	CE2 PHE F 461	46.665 40.453 62.887 1.00 93.44	C
ATOM 10780	CZ PHE F 461	45.511 39.723 62.698 1.00 93.70	C
ATOM 10781	N THR F 465	46.080 48.070 69.919 1.00128.09	N
ATOM 10782	CA THR F 465	47.275 48.516 69.200 1.00127.92	C
ATOM 10783	C THR F 465	48.509 47.732 69.610 1.00126.82	C
ATOM 10784	O THR F 465	48.993 46.885 68.848 1.00127.12	O
ATOM 10785	CB THR F 465	47.529 50.024 69.364 1.00128.71	C
ATOM 10786	OG1 THR F 465	48.921 50.323 69.170 1.00129.08	O
ATOM 10787	CG2 THR F 465	47.131 50.503 70.758 1.00129.15	C
ATOM 10788	N LEU F 466	49.036 47.920 70.818 1.00124.77	N
ATOM 10789	CA LEU F 466	50.204 47.163 71.281 1.00122.08	C
ATOM 10790	C LEU F 466	49.970 45.655 71.184 1.00119.75	C
ATOM 10791	O LEU F 466	50.911 44.895 70.921 1.00119.76	O
ATOM 10792	CB LEU F 466	50.594 47.589 72.695 1.00122.35	C
ATOM 10796	N LYS F 467	48.732 45.190 71.374 1.00116.39	N
ATOM 10797	CA LYS F 467	48.391 43.782 71.229 1.00112.94	C
ATOM 10798	C LYS F 467	48.402 43.519 69.715 1.00108.91	C
ATOM 10799	O LYS F 467	48.770 42.432 69.289 1.00108.66	O
ATOM 10800	CB LYS F 467	47.052 43.372 71.822 1.00114.52	C
ATOM 10801	CG LYS F 467	46.877 41.889 72.158 1.00115.32	C
ATOM 10802	CD LYS F 467	45.416 41.575 72.420 1.00116.50	C
ATOM 10803	CE LYS F 467	44.993 41.530 73.881 1.00117.04	C
ATOM 10804	NZ LYS F 467	43.512 41.412 74.043 1.00116.88	N
ATOM 10805	N SER F 468	48.037 44.510 68.909 1.00103.89	N
ATOM 10806	CA SER F 468	48.049 44.395 67.468 1.00 99.80	C
ATOM 10807	C SER F 468	49.475 44.280 66.930 1.00 96.55	C
ATOM 10808	O SER F 468	49.770 43.524 66.011 1.00 96.17	O
ATOM 10809	CB SER F 468	47.436 45.617 66.780 1.00100.03	C
ATOM 10810	OG SER F 468	46.057 45.693 67.060 1.00101.11	O
ATOM 10811	N LEU F 469	50.372 45.063 67.533 1.00 92.49	N
ATOM 10812	CA LEU F 469	51.774 45.046 67.131 1.00 88.39	C
ATOM 10813	C LEU F 469	52.313 43.664 67.458 1.00 86.07	C
ATOM 10814	O LEU F 469	53.102 43.098 66.707 1.00 85.58	O
ATOM 10815	CB LEU F 469	52.515 46.211 67.760 1.00 88.53	C
ATOM 10819	N GLU F 470	51.876 43.075 68.560 1.00 83.98	N
ATOM 10820	CA GLU F 470	52.310 41.730 68.934 1.00 82.73	C
ATOM 10821	C GLU F 470	51.629 40.703 68.049 1.00 78.47	C
ATOM 10822	O GLU F 470	52.219 39.715 67.627 1.00 77.03	O
ATOM 10823	CB GLU F 470	52.114 41.561 70.419 1.00 87.19	C
ATOM 10824	CG GLU F 470	51.441 40.290 70.885 1.00 93.23	C

ATOM 10825	CD GLU F 470	50.946 40.395 72.321 1.00 97.13	C
ATOM 10826	OE1 GLU F 470	50.884 41.537 72.862 1.00 99.08	O
ATOM 10827	OE2 GLU F 470	50.622 39.322 72.903 1.00 99.20	O
ATOM 10828	N GLU F 471	50.371 40.922 67.697 1.00 74.90	N
ATOM 10829	CA GLU F 471	49.591 40.072 66.812 1.00 70.85	C
ATOM 10830	C GLU F 471	50.236 40.126 65.428 1.00 69.58	C
ATOM 10831	O GLU F 471	50.394 39.106 64.767 1.00 70.16	O
ATOM 10832	CB GLU F 471	48.142 40.498 66.685 1.00 69.11	C
ATOM 10833	CG GLU F 471	47.272 40.342 67.888 1.00 67.78	C
ATOM 10834	CD GLU F 471	46.451 39.098 67.960 1.00 67.67	C
ATOM 10835	OE1 GLU F 471	45.463 38.933 67.239 1.00 67.35	O
ATOM 10836	OE2 GLU F 471	46.744 38.189 68.759 1.00 68.74	O
ATOM 10837	N LYS F 472	50.629 41.310 64.972 1.00 67.98	N
ATOM 10838	CA LYS F 472	51.277 41.456 63.684 1.00 66.56	C
ATOM 10839	C LYS F 472	52.618 40.733 63.676 1.00 65.04	C
ATOM 10840	O LYS F 472	52.913 40.060 62.679 1.00 64.47	O
ATOM 10841	CB LYS F 472	51.447 42.912 63.296 1.00 67.82	C
ATOM 10842	CG LYS F 472	50.174 43.596 62.874 1.00 69.81	C
ATOM 10843	CD LYS F 472	50.453 44.905 62.169 1.00 72.83	C
ATOM 10844	CE LYS F 472	49.448 46.002 62.476 1.00 75.04	C
ATOM 10845	NZ LYS F 472	48.246 46.031 61.590 1.00 76.63	N
ATOM 10846	N ASP F 473	53.420 40.816 64.729 1.00 64.11	N
ATOM 10847	CA ASP F 473	54.696 40.100 64.714 1.00 64.95	C
ATOM 10848	C ASP F 473	54.506 38.594 64.648 1.00 62.27	C
ATOM 10849	O ASP F 473	55.143 37.897 63.879 1.00 63.54	O
ATOM 10850	CB ASP F 473	55.583 40.278 65.938 1.00 68.92	C
ATOM 10851	CG ASP F 473	55.925 41.740 66.108 1.00 73.69	C
ATOM 10852	OD1 ASP F 473	55.632 42.556 65.196 1.00 76.15	O
ATOM 10853	OD2 ASP F 473	56.496 42.055 67.179 1.00 76.24	O
ATOM 10854	N HIS F 474	53.615 38.100 65.493 1.00 58.46	N
ATOM 10855	CA HIS F 474	53.345 36.677 65.512 1.00 54.71	C
ATOM 10856	C HIS F 474	53.047 36.219 64.093 1.00 53.22	C
ATOM 10857	O HIS F 474	53.650 35.294 63.571 1.00 52.09	O
ATOM 10858	CB HIS F 474	52.140 36.473 66.425 1.00 54.10	C
ATOM 10859	CG HIS F 474	51.882 34.990 66.467 1.00 53.93	C
ATOM 10860	ND1 HIS F 474	52.868 34.128 66.908 1.00 53.41	N
ATOM 10861	CD2 HIS F 474	50.808 34.264 66.087 1.00 53.82	C
ATOM 10862	CE1 HIS F 474	52.363 32.912 66.820 1.00 54.51	C
ATOM 10863	NE2 HIS F 474	51.127 32.956 66.321 1.00 54.01	N
ATOM 10864	N ILE F 475	52.093 36.885 63.450 1.00 52.24	N
ATOM 10865	CA ILE F 475	51.745 36.564 62.086 1.00 52.58	C
ATOM 10866	C ILE F 475	52.960 36.634 61.182 1.00 52.87	C
ATOM 10867	O ILE F 475	53.228 35.692 60.437 1.00 51.89	O
ATOM 10868	CB ILE F 475	50.631 37.471 61.541 1.00 52.61	C
ATOM 10869	CG1 ILE F 475	49.369 37.116 62.325 1.00 52.30	C

ATOM 10870	CG2 ILE F 475	50.440	37.276	60.038	1.00	52.39	C
ATOM 10871	CD1 ILE F 475	48.159	37.813	61.770	1.00	52.91	C
ATOM 10872	N HIS F 476	53.717	37.724	61.236	1.00	54.73	N
ATOM 10873	CA HIS F 476	54.902	37.790	60.368	1.00	57.55	C
ATOM 10874	C HIS F 476	55.820	36.599	60.604	1.00	58.10	C
ATOM 10875	O HIS F 476	56.336	35.970	59.667	1.00	58.67	O
ATOM 10876	CB HIS F 476	55.584	39.140	60.506	1.00	59.36	C
ATOM 10877	CG HIS F 476	54.802	40.211	59.801	1.00	62.37	C
ATOM 10878	ND1 HIS F 476	54.273	40.025	58.517	1.00	62.61	N
ATOM 10879	CD2 HIS F 476	54.461	41.467	60.223	1.00	62.96	C
ATOM 10880	CE1 HIS F 476	53.633	41.151	58.191	1.00	63.28	C
ATOM 10881	NE2 HIS F 476	53.730	42.036	59.187	1.00	63.48	N
ATOM 10882	N ARG F 477	56.036	36.226	61.855	1.00	58.31	N
ATOM 10883	CA ARG F 477	56.844	35.126	62.294	1.00	58.06	C
ATOM 10884	C ARG F 477	56.426	33.776	61.747	1.00	55.94	C
ATOM 10885	O ARG F 477	57.251	32.985	61.304	1.00	56.54	O
ATOM 10886	CB ARG F 477	56.748	35.022	63.807	1.00	62.10	C
ATOM 10887	CG ARG F 477	58.131	34.705	64.353	1.00	68.27	C
ATOM 10888	CD ARG F 477	58.834	36.050	64.552	1.00	73.65	C
ATOM 10889	NE ARG F 477	58.063	36.805	65.548	1.00	79.47	N
ATOM 10890	CZ ARG F 477	58.098	36.548	66.867	1.00	82.33	C
ATOM 10891	NH1 ARG F 477	58.887	35.556	67.308	1.00	84.23	N
ATOM 10892	NH2 ARG F 477	57.373	37.261	67.730	1.00	82.53	N
ATOM 10893	N VAL F 478	55.143	33.478	61.765	1.00	53.40	N
ATOM 10894	CA VAL F 478	54.622	32.213	61.243	1.00	51.30	C
ATOM 10895	C VAL F 478	54.799	32.206	59.741	1.00	51.11	C
ATOM 10896	O VAL F 478	55.190	31.244	59.076	1.00	51.05	O
ATOM 10897	CB VAL F 478	53.154	32.058	61.658	1.00	50.79	C
ATOM 10898	CG1 VAL F 478	52.544	30.767	61.171	1.00	50.20	C
ATOM 10899	CG2 VAL F 478	53.094	32.127	63.186	1.00	51.17	C
ATOM 10900	N LEU F 479	54.559	33.384	59.139	1.00	50.79	N
ATOM 10901	CA LEU F 479	54.720	33.574	57.700	1.00	48.64	C
ATOM 10902	C LEU F 479	56.157	33.226	57.289	1.00	49.23	C
ATOM 10903	O LEU F 479	56.349	32.603	56.227	1.00	48.47	O
ATOM 10904	CB LEU F 479	54.304	34.976	57.302	1.00	45.15	C
ATOM 10905	CG LEU F 479	52.823	35.174	57.047	1.00	42.81	C
ATOM 10906	CD1 LEU F 479	52.521	36.631	56.755	1.00	42.97	C
ATOM 10907	CD2 LEU F 479	52.324	34.328	55.902	1.00	42.89	C
ATOM 10908	N ASP F 480	57.136	33.582	58.140	1.00	49.32	N
ATOM 10909	CA ASP F 480	58.516	33.233	57.805	1.00	50.47	C
ATOM 10910	C ASP F 480	58.669	31.718	57.863	1.00	51.26	C
ATOM 10911	O ASP F 480	59.258	31.092	56.986	1.00	50.01	O
ATOM 10912	CB ASP F 480	59.530	33.911	58.680	1.00	50.75	C
ATOM 10913	CG ASP F 480	59.663	35.392	58.480	1.00	52.92	C
ATOM 10914	OD1 ASP F 480	59.411	35.938	57.392	1.00	54.40	O

ATOM 10915	OD2 ASP F 480	60.035 36.124 59.430 1.00 54.11	O
ATOM 10916	N LYS F 481	58.087 31.122 58.907 1.00 53.61	N
ATOM 10917	CA LYS F 481	58.163 29.669 59.082 1.00 55.04	C
ATOM 10918	C LYS F 481	57.567 28.983 57.860 1.00 54.13	C
ATOM 10919	O LYS F 481	58.219 28.125 57.250 1.00 53.86	O
ATOM 10920	CB LYS F 481	57.477 29.196 60.350 1.00 58.03	C
ATOM 10921	CG LYS F 481	57.841 27.756 60.707 1.00 62.54	C
ATOM 10922	CD LYS F 481	59.009 27.733 61.695 1.00 66.58	C
ATOM 10923	CE LYS F 481	59.816 26.449 61.645 1.00 69.48	C
ATOM 10924	NZ LYS F 481	59.639 25.686 60.356 1.00 72.18	N
ATOM 10925	N ILE F 482	56.355 29.416 57.468 1.00 52.23	N
ATOM 10926	CA ILE F 482	55.767 28.817 56.273 1.00 50.43	C
ATOM 10927	C ILE F 482	56.677 29.068 55.090 1.00 49.78	C
ATOM 10928	O ILE F 482	56.782 28.137 54.288 1.00 49.87	O
ATOM 10929	CB ILE F 482	54.345 29.263 56.003 1.00 50.41	C
ATOM 10930	CG1 ILE F 482	53.458 28.736 57.138 1.00 50.20	C
ATOM 10931	CG2 ILE F 482	53.782 28.715 54.706 1.00 50.10	C
ATOM 10932	CD1 ILE F 482	52.442 29.780 57.559 1.00 50.84	C
ATOM 10933	N THR F 483	57.339 30.210 54.971 1.00 49.73	N
ATOM 10934	CA THR F 483	58.262 30.403 53.833 1.00 49.98	C
ATOM 10935	C THR F 483	59.380 29.362 53.838 1.00 50.42	C
ATOM 10936	O THR F 483	59.664 28.709 52.830 1.00 49.70	O
ATOM 10937	CB THR F 483	58.888 31.804 53.897 1.00 49.41	C
ATOM 10938	OG1 THR F 483	57.806 32.715 53.644 1.00 50.37	O
ATOM 10939	CG2 THR F 483	59.970 31.989 52.861 1.00 49.75	C
ATOM 10940	N ASP F 484	60.000 29.177 55.015 1.00 50.59	N
ATOM 10941	CA ASP F 484	61.068 28.192 55.168 1.00 49.75	C
ATOM 10942	C ASP F 484	60.522 26.826 54.776 1.00 49.68	C
ATOM 10943	O ASP F 484	61.178 26.087 54.037 1.00 50.73	O
ATOM 10944	CB ASP F 484	61.654 28.132 56.568 1.00 50.04	C
ATOM 10945	CG ASP F 484	62.327 29.409 57.016 1.00 50.94	C
ATOM 10946	OD1 ASP F 484	62.712 30.271 56.192 1.00 50.53	O
ATOM 10947	OD2 ASP F 484	62.475 29.573 58.246 1.00 51.48	O
ATOM 10948	N THR F 485	59.321 26.446 55.207 1.00 48.80	N
ATOM 10949	CA THR F 485	58.792 25.136 54.814 1.00 48.37	C
ATOM 10950	C THR F 485	58.697 24.995 53.302 1.00 50.01	C
ATOM 10951	O THR F 485	58.896 23.913 52.742 1.00 50.58	O
ATOM 10952	CB THR F 485	57.380 25.034 55.414 1.00 47.22	C
ATOM 10953	OG1 THR F 485	57.583 25.302 56.802 1.00 46.51	O
ATOM 10954	CG2 THR F 485	56.747 23.710 55.114 1.00 46.08	C
ATOM 10955	N LEU F 486	58.366 26.093 52.609 1.00 50.21	N
ATOM 10956	CA LEU F 486	58.233 26.051 51.170 1.00 50.20	C
ATOM 10957	C LEU F 486	59.580 25.756 50.534 1.00 51.68	C
ATOM 10958	O LEU F 486	59.719 24.883 49.683 1.00 51.70	O
ATOM 10959	CB LEU F 486	57.670 27.366 50.637 1.00 48.69	C

ATOM 10960	CG LEU F 486	56.165	27.417	50.412	1.00	47.75	C
ATOM 10961	CD1 LEU F 486	55.742	28.794	49.937	1.00	46.95	C
ATOM 10962	CD2 LEU F 486	55.720	26.316	49.460	1.00	47.84	C
ATOM 10963	N ILE F 487	60.590	26.509	50.975	1.00	53.52	N
ATOM 10964	CA ILE F 487	61.938	26.348	50.424	1.00	54.71	C
ATOM 10965	C ILE F 487	62.402	24.923	50.676	1.00	56.74	C
ATOM 10966	O ILE F 487	62.887	24.219	49.795	1.00	56.96	O
ATOM 10967	CB ILE F 487	62.908	27.325	51.092	1.00	53.76	C
ATOM 10968	CG1 ILE F 487	62.584	28.748	50.660	1.00	54.18	C
ATOM 10969	CG2 ILE F 487	64.313	26.891	50.753	1.00	54.27	C
ATOM 10970	CD1 ILE F 487	63.096	29.211	49.319	1.00	54.59	C
ATOM 10971	N HIS F 488	62.207	24.514	51.931	1.00	58.73	N
ATOM 10972	CA HIS F 488	62.568	23.177	52.360	1.00	60.13	C
ATOM 10973	C HIS F 488	61.977	22.198	51.371	1.00	59.48	C
ATOM 10974	O HIS F 488	62.660	21.352	50.840	1.00	60.93	O
ATOM 10975	CB HIS F 488	61.985	22.882	53.740	1.00	63.88	C
ATOM 10976	CG HIS F 488	62.096	21.418	54.086	1.00	67.03	C
ATOM 10977	ND1 HIS F 488	63.324	20.845	54.358	1.00	67.88	N
ATOM 10978	CD2 HIS F 488	61.148	20.441	54.188	1.00	67.56	C
ATOM 10979	CE1 HIS F 488	63.095	19.559	54.614	1.00	68.94	C
ATOM 10980	NE2 HIS F 488	61.799	19.279	54.522	1.00	68.05	N
ATOM 10981	N LEU F 489	60.688	22.275	51.111	1.00	59.35	N
ATOM 10982	CA LEU F 489	60.058	21.368	50.171	1.00	59.27	C
ATOM 10983	C LEU F 489	60.759	21.372	48.829	1.00	60.05	C
ATOM 10984	O LEU F 489	61.005	20.317	48.246	1.00	60.98	O
ATOM 10985	CB LEU F 489	58.620	21.863	49.994	1.00	58.81	C
ATOM 10986	CG LEU F 489	57.684	21.425	51.108	1.00	58.70	C
ATOM 10987	CD1 LEU F 489	56.354	22.143	50.947	1.00	60.43	C
ATOM 10988	CD2 LEU F 489	57.460	19.930	51.036	1.00	58.81	C
ATOM 10989	N MET F 490	61.066	22.544	48.292	1.00	60.79	N
ATOM 10990	CA MET F 490	61.701	22.682	46.992	1.00	62.20	C
ATOM 10991	C MET F 490	63.107	22.097	46.885	1.00	63.28	C
ATOM 10992	O MET F 490	63.477	21.470	45.885	1.00	63.20	O
ATOM 10993	CB MET F 490	61.777	24.179	46.671	1.00	61.85	C
ATOM 10994	CG MET F 490	60.561	24.667	45.889	1.00	61.64	C
ATOM 10995	SD MET F 490	60.439	26.453	46.102	1.00	62.81	S
ATOM 10996	CE MET F 490	58.677	26.685	46.060	1.00	62.74	C
ATOM 10997	N ALA F 491	63.884	22.338	47.951	1.00	63.63	N
ATOM 10998	CA ALA F 491	65.250	21.823	48.003	1.00	63.42	C
ATOM 10999	C ALA F 491	65.101	20.311	47.970	1.00	63.76	C
ATOM 11000	O ALA F 491	65.730	19.639	47.148	1.00	64.37	O
ATOM 11001	CB ALA F 491	65.964	22.304	49.230	1.00	63.28	C
ATOM 11002	N LYS F 492	64.213	19.787	48.803	1.00	64.18	N
ATOM 11003	CA LYS F 492	63.968	18.347	48.826	1.00	66.02	C
ATOM 11004	C LYS F 492	63.641	17.879	47.417	1.00	66.86	C

ATOM 11005 O LYS F 492	64.140 16.805 47.043 1.00 68.59	O
ATOM 11006 CB LYS F 492	62.952 17.917 49.881 1.00 65.38	C
ATOM 11011 N ALA F 493	62.964 18.624 46.550 1.00 67.22	N
ATOM 11012 CA ALA F 493	62.729 18.158 45.185 1.00 68.22	C
ATOM 11013 C ALA F 493	63.973 18.406 44.322 1.00 68.29	C
ATOM 11014 O ALA F 493	64.020 18.204 43.109 1.00 68.53	O
ATOM 11015 CB ALA F 493	61.504 18.806 44.555 1.00 68.00	C
ATOM 11016 N GLY F 494	65.033 18.875 44.944 1.00 68.05	N
ATOM 11017 CA GLY F 494	66.279 19.151 44.300 1.00 69.32	C
ATOM 11018 C GLY F 494	66.184 20.266 43.287 1.00 69.38	C
ATOM 11019 O GLY F 494	66.434 19.980 42.123 1.00 70.84	O
ATOM 11020 N LEU F 495	65.830 21.488 43.665 1.00 68.93	N
ATOM 11021 CA LEU F 495	65.833 22.527 42.636 1.00 68.25	C
ATOM 11022 C LEU F 495	67.084 23.324 43.013 1.00 68.28	C
ATOM 11023 O LEU F 495	67.353 23.379 44.212 1.00 67.83	O
ATOM 11024 CB LEU F 495	64.661 23.472 42.617 1.00 68.23	C
ATOM 11025 CG LEU F 495	63.245 22.931 42.719 1.00 68.18	C
ATOM 11026 CD1 LEU F 495	62.251 24.043 42.412 1.00 68.07	C
ATOM 11027 CD2 LEU F 495	63.021 21.786 41.757 1.00 68.75	C
ATOM 11028 N THR F 496	67.763 23.909 42.051 1.00 68.89	N
ATOM 11029 CA THR F 496	68.934 24.708 42.434 1.00 70.03	C
ATOM 11030 C THR F 496	68.554 25.738 43.470 1.00 69.71	C
ATOM 11031 O THR F 496	67.387 26.056 43.639 1.00 70.64	O
ATOM 11032 CB THR F 496	69.367 25.500 41.185 1.00 70.77	C
ATOM 11033 OG1 THR F 496	69.554 24.539 40.144 1.00 71.59	O
ATOM 11034 CG2 THR F 496	70.624 26.315 41.405 1.00 72.40	C
ATOM 11035 N LEU F 497	69.504 26.377 44.115 1.00 70.17	N
ATOM 11036 CA LEU F 497	69.233 27.447 45.054 1.00 71.02	C
ATOM 11037 C LEU F 497	68.587 28.606 44.303 1.00 71.86	C
ATOM 11038 O LEU F 497	67.750 29.339 44.829 1.00 72.92	O
ATOM 11039 CB LEU F 497	70.516 27.943 45.656 1.00 72.07	C
ATOM 11040 CG LEU F 497	70.604 28.132 47.169 1.00 73.56	C
ATOM 11041 CD1 LEU F 497	71.214 29.527 47.386 1.00 74.65	C
ATOM 11042 CD2 LEU F 497	69.272 28.027 47.894 1.00 73.52	C
ATOM 11043 N GLN F 498	68.955 28.790 43.042 1.00 72.34	N
ATOM 11044 CA GLN F 498	68.370 29.836 42.221 1.00 72.36	C
ATOM 11045 C GLN F 498	66.980 29.403 41.782 1.00 70.52	C
ATOM 11046 O GLN F 498	66.087 30.243 41.758 1.00 71.53	O
ATOM 11047 CB GLN F 498	69.221 30.186 41.003 1.00 74.85	C
ATOM 11048 CG GLN F 498	68.408 30.778 39.862 1.00 78.26	C
ATOM 11049 CD GLN F 498	69.217 31.388 38.749 1.00 80.37	C
ATOM 11050 OE1 GLN F 498	68.953 32.513 38.305 1.00 81.97	O
ATOM 11051 NE2 GLN F 498	70.222 30.662 38.264 1.00 81.46	N
ATOM 11052 N GLN F 499	66.729 28.153 41.447 1.00 68.46	N
ATOM 11053 CA GLN F 499	65.380 27.771 41.038 1.00 67.58	C

ATOM 11054	C	GLN F 499	64.432	27.889	42.225	1.00	66.81	C
ATOM 11055	O	GLN F 499	63.232	28.169	42.074	1.00	67.73	O
ATOM 11056	CB	GLN F 499	65.319	26.328	40.569	1.00	68.41	C
ATOM 11057	CG	GLN F 499	66.569	25.956	39.797	1.00	69.77	C
ATOM 11058	CD	GLN F 499	66.310	24.694	38.995	1.00	71.11	C
ATOM 11059	OE1	GLN F 499	66.251	23.602	39.570	1.00	72.06	O
ATOM 11060	NE2	GLN F 499	66.161	24.911	37.692	1.00	71.62	N
ATOM 11061	N	GLN F 500	65.002	27.639	43.405	1.00	64.28	N
ATOM 11062	CA	GLN F 500	64.214	27.745	44.626	1.00	61.77	C
ATOM 11063	C	GLN F 500	63.712	29.189	44.755	1.00	59.30	C
ATOM 11064	O	GLN F 500	62.486	29.340	44.816	1.00	58.46	O
ATOM 11065	CB	GLN F 500	65.049	27.385	45.832	1.00	62.64	C
ATOM 11066	CG	GLN F 500	65.107	25.907	46.181	1.00	64.31	C
ATOM 11067	CD	GLN F 500	66.332	25.698	47.072	1.00	65.36	C
ATOM 11068	OE1	GLN F 500	66.529	26.331	48.105	1.00	64.72	O
ATOM 11069	NE2	GLN F 500	67.187	24.783	46.622	1.00	66.80	N
ATOM 11070	N	HIS F 501	64.620	30.184	44.744	1.00	55.48	N
ATOM 11071	CA	HIS F 501	64.119	31.542	44.871	1.00	53.41	C
ATOM 11072	C	HIS F 501	63.185	31.939	43.734	1.00	53.11	C
ATOM 11073	O	HIS F 501	62.247	32.725	43.949	1.00	52.75	O
ATOM 11074	CB	HIS F 501	65.178	32.569	45.105	1.00	53.16	C
ATOM 11075	CG	AHIS F 501	66.179	32.918	44.074	0.50	53.76	C
ATOM 11076	CG	BHIS F 501	66.317	32.267	46.012	0.50	53.33	C
ATOM 11077	ND1	AHIS F 501	67.522	33.081	44.383	0.50	54.09	N
ATOM 11078	ND1	BHIS F 501	66.152	31.677	47.244	0.50	53.82	N
ATOM 11079	CD2	AHIS F 501	66.066	33.154	42.746	0.50	53.48	C
ATOM 11080	CD2	BHIS F 501	67.651	32.485	45.885	0.50	53.10	C
ATOM 11081	CE1	AHIS F 501	68.181	33.392	43.282	0.50	54.13	C
ATOM 11082	CE1	BHIS F 501	67.323	31.536	47.834	0.50	53.60	C
ATOM 11083	NE2	AHIS F 501	67.317	33.439	42.276	0.50	53.75	N
ATOM 11084	NE2	BHIS F 501	68.248	32.021	47.025	0.50	53.22	N
ATOM 11085	N	GLN F 502	63.378	31.436	42.522	1.00	52.18	N
ATOM 11086	CA	GLN F 502	62.484	31.816	41.435	1.00	52.32	C
ATOM 11087	C	GLN F 502	61.100	31.233	41.678	1.00	52.12	C
ATOM 11088	O	GLN F 502	60.091	31.951	41.667	1.00	52.45	O
ATOM 11089	CB	GLN F 502	63.113	31.420	40.109	1.00	53.34	C
ATOM 11090	CG	GLN F 502	64.486	32.061	39.941	1.00	54.80	C
ATOM 11091	CD	GLN F 502	65.024	32.032	38.524	1.00	55.67	C
ATOM 11092	OE1	GLN F 502	64.732	31.086	37.771	1.00	56.90	O
ATOM 11093	NE2	GLN F 502	65.796	33.063	38.189	1.00	54.54	N
ATOM 11094	N	ARG F 503	60.984	29.933	41.957	1.00	50.60	N
ATOM 11095	CA	ARG F 503	59.688	29.332	42.212	1.00	48.59	C
ATOM 11096	C	ARG F 503	58.954	30.015	43.364	1.00	48.70	C
ATOM 11097	O	ARG F 503	57.745	30.238	43.219	1.00	50.52	O
ATOM 11098	CB	ARG F 503	59.831	27.858	42.594	1.00	47.57	C

ATOM 11099	CG ARG F 503	58.495 27.133 42.397 1.00 45.41	C
ATOM 11100	CD ARG F 503	58.727 25.650 42.393 1.00 43.73	C
ATOM 11101	NE ARG F 503	57.480 24.950 42.621 1.00 44.49	N
ATOM 11102	CZ ARG F 503	56.705 24.525 41.628 1.00 45.40	C
ATOM 11103	NH1 ARG F 503	57.071 24.773 40.380 1.00 44.83	N
ATOM 11104	NH2 ARG F 503	55.569 23.876 41.894 1.00 45.98	N
ATOM 11105	N LEU F 504	59.656 30.315 44.458 1.00 46.15	N
ATOM 11106	CA LEU F 504	59.049 30.989 45.576 1.00 44.20	C
ATOM 11107	C LEU F 504	58.372 32.249 45.036 1.00 45.60	C
ATOM 11108	O LEU F 504	57.154 32.391 45.194 1.00 47.19	O
ATOM 11109	CB LEU F 504	60.068 31.417 46.630 1.00 43.01	C
ATOM 11110	CG LEU F 504	59.490 32.000 47.927 1.00 42.00	C
ATOM 11111	CD1 LEU F 504	58.583 31.040 48.666 1.00 39.85	C
ATOM 11112	CD2 LEU F 504	60.603 32.448 48.860 1.00 41.86	C
ATOM 11113	N ALA F 505	59.150 33.112 44.373 1.00 45.02	N
ATOM 11114	CA ALA F 505	58.598 34.338 43.822 1.00 43.67	C
ATOM 11115	C ALA F 505	57.491 33.979 42.869 1.00 45.02	C
ATOM 11116	O ALA F 505	56.432 34.596 42.995 1.00 47.78	O
ATOM 11117	CB ALA F 505	59.666 35.155 43.156 1.00 42.97	C
ATOM 11118	N GLN F 506	57.605 33.000 41.985 1.00 46.09	N
ATOM 11119	CA GLN F 506	56.482 32.715 41.101 1.00 47.54	C
ATOM 11120	C GLN F 506	55.251 32.319 41.893 1.00 47.38	C
ATOM 11121	O GLN F 506	54.155 32.773 41.499 1.00 48.55	O
ATOM 11122	CB GLN F 506	56.782 31.736 39.967 1.00 49.18	C
ATOM 11123	CG AGLN F 506	58.224 31.567 39.570 0.50 50.43	C
ATOM 11124	CG BGLN F 506	57.742 32.436 38.980 0.50 49.95	C
ATOM 11125	CD AGLN F 506	58.566 30.641 38.429 0.50 51.26	C
ATOM 11126	CD BGLN F 506	57.033 33.378 38.036 0.50 50.53	C
ATOM 11127	OE1AGLN F 506	58.054 29.525 38.268 0.50 51.33	O
ATOM 11128	OE1BGLN F 506	55.801 33.484 38.055 0.50 52.29	O
ATOM 11129	NE2AGLN F 506	59.485 31.109 37.578 0.50 51.61	N
ATOM 11130	NE2BGLN F 506	57.796 34.060 37.197 0.50 49.76	N
ATOM 11131	N LEU F 507	55.397 31.539 42.949 1.00 46.38	N
ATOM 11132	CA LEU F 507	54.221 31.135 43.715 1.00 46.66	C
ATOM 11133	C LEU F 507	53.540 32.293 44.417 1.00 45.94	C
ATOM 11134	O LEU F 507	52.323 32.487 44.287 1.00 46.84	O
ATOM 11135	CB LEU F 507	54.587 30.038 44.704 1.00 48.62	C
ATOM 11136	CG LEU F 507	54.990 28.674 44.112 1.00 49.01	C
ATOM 11137	CD1 LEU F 507	55.303 27.719 45.256 1.00 49.24	C
ATOM 11138	CD2 LEU F 507	53.914 28.136 43.203 1.00 49.01	C
ATOM 11139	N LEU F 508	54.294 33.086 45.149 1.00 44.54	N
ATOM 11140	CA LEU F 508	53.765 34.258 45.829 1.00 43.27	C
ATOM 11141	C LEU F 508	53.222 35.284 44.860 1.00 42.96	C
ATOM 11142	O LEU F 508	52.195 35.924 45.207 1.00 44.75	O
ATOM 11143	CB LEU F 508	54.863 34.851 46.719 1.00 43.15	C

ATOM 11144	CG LEU F 508	55.317 33.878 47.822 1.00 43.12	C
ATOM 11145	CD1 LEU F 508	56.419 34.487 48.651 1.00 43.11	C
ATOM 11146	CD2 LEU F 508	54.159 33.451 48.713 1.00 43.34	C
ATOM 11147	N LEU F 509	53.748 35.473 43.645 1.00 40.32	N
ATOM 11148	CA LEU F 509	53.096 36.459 42.786 1.00 39.61	C
ATOM 11149	C LEU F 509	51.680 36.072 42.372 1.00 40.83	C
ATOM 11150	O LEU F 509	50.860 36.943 42.038 1.00 40.38	O
ATOM 11151	CB LEU F 509	53.958 36.802 41.597 1.00 38.50	C
ATOM 11152	CG LEU F 509	55.197 37.635 41.843 1.00 37.90	C
ATOM 11153	CD1 LEU F 509	55.991 37.733 40.569 1.00 38.24	C
ATOM 11154	CD2 LEU F 509	54.828 38.996 42.393 1.00 38.46	C
ATOM 11155	N ILE F 510	51.304 34.791 42.360 1.00 41.81	N
ATOM 11156	CA ILE F 510	49.961 34.356 41.986 1.00 42.04	C
ATOM 11157	C ILE F 510	48.994 34.860 43.062 1.00 41.38	C
ATOM 11158	O ILE F 510	47.828 35.202 42.786 1.00 41.21	O
ATOM 11159	CB ILE F 510	49.818 32.841 41.786 1.00 42.52	C
ATOM 11160	CG1 ILE F 510	50.297 32.370 40.411 1.00 44.20	C
ATOM 11161	CG2 ILE F 510	48.373 32.372 41.807 1.00 42.26	C
ATOM 11162	CD1 ILE F 510	51.214 31.150 40.472 1.00 45.53	C
ATOM 11163	N LEU F 511	49.485 34.943 44.299 1.00 39.86	N
ATOM 11164	CA LEU F 511	48.615 35.403 45.368 1.00 41.28	C
ATOM 11165	C LEU F 511	47.978 36.742 45.043 1.00 41.62	C
ATOM 11166	O LEU F 511	46.810 36.980 45.341 1.00 42.04	O
ATOM 11167	CB LEU F 511	49.320 35.395 46.708 1.00 41.52	C
ATOM 11168	CG LEU F 511	49.800 34.038 47.218 1.00 40.26	C
ATOM 11169	CD1 LEU F 511	50.181 34.212 48.676 1.00 40.73	C
ATOM 11170	CD2 LEU F 511	48.744 32.984 47.043 1.00 38.97	C
ATOM 11171	N SER F 512	48.688 37.652 44.415 1.00 42.09	N
ATOM 11172	CA SER F 512	48.168 38.928 43.996 1.00 41.54	C
ATOM 11173	C SER F 512	46.952 38.747 43.091 1.00 41.41	C
ATOM 11174	O SER F 512	45.923 39.395 43.321 1.00 41.60	O
ATOM 11175	CB SER F 512	49.244 39.584 43.128 1.00 42.91	C
ATOM 11176	OG SER F 512	49.283 40.870 43.691 1.00 46.56	O
ATOM 11177	N HIS F 513	47.083 37.857 42.084 1.00 39.84	N
ATOM 11178	CA HIS F 513	45.955 37.586 41.194 1.00 38.72	C
ATOM 11179	C HIS F 513	44.761 37.059 41.971 1.00 38.35	C
ATOM 11180	O HIS F 513	43.621 37.520 41.801 1.00 36.40	O
ATOM 11181	CB HIS F 513	46.376 36.667 40.037 1.00 38.57	C
ATOM 11182	CG AHIS F 513	47.354 37.550 39.294 0.50 39.23	C
ATOM 11183	CG BHIS F 513	45.341 36.573 38.960 0.50 39.65	C
ATOM 11184	ND1AHIS F 513	48.707 37.326 39.314 0.50 40.16	N
ATOM 11185	ND1BHIS F 513	44.847 35.382 38.474 0.50 39.84	N
ATOM 11186	CD2AHIS F 513	47.176 38.672 38.562 0.50 39.25	C
ATOM 11187	CD2BHIS F 513	44.698 37.548 38.258 0.50 39.94	C
ATOM 11188	CE1AHIS F 513	49.323 38.294 38.633 0.50 39.56	C

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ATOM	11189	CE1BHIS F 513	43.945	35.639	37.533	0.50	39.92	C
ATOM	11190	NE2AHIS F 513	48.412	39.089	38.129	0.50	39.08	N
ATOM	11191	NE2BHIS F 513	43.829	36.944	37.379	0.50	39.67	N
ATOM	11192	N ILE F 514	45.046	36.130	42.891	1.00	37.94	N
ATOM	11193	CA ILE F 514	43.956	35.607	43.727	1.00	37.95	C
ATOM	11194	C ILE F 514	43.323	36.738	44.505	1.00	38.14	C
ATOM	11195	O ILE F 514	42.091	36.813	44.587	1.00	38.06	O
ATOM	11196	CB ILE F 514	44.469	34.464	44.602	1.00	38.53	C
ATOM	11197	CG1 ILE F 514	44.752	33.239	43.698	1.00	37.95	C
ATOM	11198	CG2 ILE F 514	43.507	34.110	45.728	1.00	38.22	C
ATOM	11199	CD1 ILE F 514	45.853	32.392	44.288	1.00	36.74	C
ATOM	11200	N ARG F 515	44.090	37.696	45.036	1.00	38.95	N
ATOM	11201	CA ARG F 515	43.491	38.835	45.747	1.00	39.29	C
ATOM	11202	C ARG F 515	42.550	39.571	44.789	1.00	39.27	C
ATOM	11203	O ARG F 515	41.391	39.812	45.086	1.00	38.67	O
ATOM	11204	CB ARG F 515	44.499	39.845	46.257	1.00	39.21	C
ATOM	11205	CG ARG F 515	44.003	40.878	47.233	1.00	40.19	C
ATOM	11206	CD ARG F 515	43.405	40.183	48.418	1.00	42.92	C
ATOM	11207	NE ARG F 515	43.512	40.907	49.675	1.00	45.76	N
ATOM	11208	CZ ARG F 515	44.676	40.966	50.330	1.00	47.52	C
ATOM	11209	NH1 ARG F 515	45.756	40.369	49.828	1.00	48.62	N
ATOM	11210	NH2 ARG F 515	44.755	41.623	51.471	1.00	46.88	N
ATOM	11211	N HIS F 516	43.115	39.881	43.617	1.00	39.12	N
ATOM	11212	CA HIS F 516	42.376	40.557	42.578	1.00	38.37	C
ATOM	11213	C HIS F 516	41.072	39.871	42.254	1.00	37.82	C
ATOM	11214	O HIS F 516	40.027	40.476	42.225	1.00	36.68	O
ATOM	11215	CB HIS F 516	43.250	40.656	41.308	1.00	40.06	C
ATOM	11216	CG HIS F 516	42.466	41.495	40.306	1.00	40.92	C
ATOM	11217	ND1 HIS F 516	42.345	42.853	40.409	1.00	40.03	N
ATOM	11218	CD2 HIS F 516	41.735	41.121	39.223	1.00	40.38	C
ATOM	11219	CE1 HIS F 516	41.588	43.286	39.448	1.00	39.76	C
ATOM	11220	NE2 HIS F 516	41.210	42.261	38.710	1.00	39.93	N
ATOM	11221	N MET F 517	41.071	38.585	41.981	1.00	39.98	N
ATOM	11222	CA MET F 517	39.908	37.782	41.665	1.00	41.54	C
ATOM	11223	C MET F 517	38.819	37.774	42.718	1.00	41.73	C
ATOM	11224	O MET F 517	37.622	37.888	42.485	1.00	40.98	O
ATOM	11225	CB MET F 517	40.385	36.314	41.580	1.00	43.05	C
ATOM	11226	CG MET F 517	40.368	35.889	40.108	1.00	45.27	C
ATOM	11227	SD MET F 517	41.025	34.239	39.933	1.00	45.86	S
ATOM	11228	CE MET F 517	42.723	34.573	40.341	1.00	48.25	C
ATOM	11229	N SER F 518	39.300	37.607	43.951	1.00	42.47	N
ATOM	11230	CA SER F 518	38.409	37.593	45.110	1.00	43.32	C
ATOM	11231	C SER F 518	37.710	38.948	45.234	1.00	43.85	C
ATOM	11232	O SER F 518	36.525	38.950	45.602	1.00	44.03	O
ATOM	11233	CB SER F 518	39.236	37.280	46.344	1.00	43.87	C

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ATOM 11234	OG SER F 518	38.735 37.915 47.496 1.00 45.68	O
ATOM 11235	N ASN F 519	38.420 40.048 44.953 1.00 43.38	N
ATOM 11236	CA ASN F 519	37.845 41.374 45.035 1.00 44.02	C
ATOM 11237	C ASN F 519	36.755 41.433 43.982 1.00 45.82	C
ATOM 11238	O ASN F 519	35.631 41.827 44.316 1.00 48.17	O
ATOM 11239	CB ASN F 519	38.851 42.484 44.829 1.00 45.86	C
ATOM 11240	CG ASN F 519	39.688 42.773 46.055 1.00 48.53	C
ATOM 11241	OD1 ASN F 519	39.121 42.742 47.157 1.00 51.16	O
ATOM 11242	ND2 ASN F 519	40.990 43.040 45.963 1.00 48.02	N
ATOM 11243	N LYS F 520	36.975 40.995 42.750 1.00 45.75	N
ATOM 11244	CA LYS F 520	35.904 41.013 41.761 1.00 45.83	C
ATOM 11245	C LYS F 520	34.810 40.060 42.192 1.00 45.71	C
ATOM 11246	O LYS F 520	33.639 40.387 42.035 1.00 47.06	O
ATOM 11247	CB LYS F 520	36.431 40.565 40.408 1.00 47.55	C
ATOM 11248	CG LYS F 520	37.777 41.261 40.186 1.00 50.89	C
ATOM 11249	CD LYS F 520	37.550 42.478 39.309 1.00 53.95	C
ATOM 11250	CE LYS F 520	37.920 43.797 39.979 1.00 55.93	C
ATOM 11251	NZ LYS F 520	37.231 44.935 39.276 1.00 57.57	N
ATOM 11252	N GLY F 521	35.187 38.902 42.725 1.00 44.69	N
ATOM 11253	CA GLY F 521	34.155 37.980 43.169 1.00 45.45	C
ATOM 11254	C GLY F 521	33.224 38.594 44.218 1.00 45.81	C
ATOM 11255	O GLY F 521	32.026 38.349 44.012 1.00 45.23	O
ATOM 11256	N MET F 522	33.685 39.299 45.278 1.00 45.57	N
ATOM 11257	CA MET F 522	32.694 39.798 46.202 1.00 47.31	C
ATOM 11258	C MET F 522	31.816 40.837 45.483 1.00 49.18	C
ATOM 11259	O MET F 522	30.613 40.833 45.692 1.00 49.91	O
ATOM 11260	CB MET F 522	33.025 40.561 47.446 1.00 47.45	C
ATOM 11261	CG MET F 522	34.239 40.366 48.262 1.00 48.06	C
ATOM 11262	SD MET F 522	34.116 39.120 49.518 1.00 48.25	S
ATOM 11263	CE MET F 522	32.372 38.941 49.745 1.00 46.61	C
ATOM 11264	N GLU F 523	32.444 41.697 44.684 1.00 50.85	N
ATOM 11265	CA GLU F 523	31.683 42.716 43.982 1.00 51.12	C
ATOM 11266	C GLU F 523	30.553 42.014 43.271 1.00 48.18	C
ATOM 11267	O GLU F 523	29.417 42.444 43.411 1.00 49.34	O
ATOM 11268	CB GLU F 523	32.559 43.545 43.075 1.00 57.03	C
ATOM 11269	CG GLU F 523	33.168 44.774 43.713 1.00 64.59	C
ATOM 11270	CD GLU F 523	32.179 45.639 44.489 1.00 69.65	C
ATOM 11271	OE1 GLU F 523	30.933 45.541 44.261 1.00 72.29	O
ATOM 11272	OE2 GLU F 523	32.644 46.455 45.342 1.00 71.67	O
ATOM 11273	N HIS F 524	30.802 40.937 42.580 1.00 45.64	N
ATOM 11274	CA HIS F 524	29.774 40.185 41.887 1.00 45.52	C
ATOM 11275	C HIS F 524	28.744 39.512 42.764 1.00 45.21	C
ATOM 11276	O HIS F 524	27.553 39.541 42.510 1.00 44.38	O
ATOM 11277	CB HIS F 524	30.472 39.082 41.061 1.00 45.03	C
ATOM 11278	CG HIS F 524	29.500 38.237 40.319 1.00 44.78	C

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ATOM 11279	ND1 HIS F 524	28.933	37.123	40.899	1.00	45.63	N
ATOM 11280	CD2 HIS F 524	28.998	38.321	39.068	1.00	45.04	C
ATOM 11281	CE1 HIS F 524	28.109	36.550	40.020	1.00	46.30	C
ATOM 11282	NE2 HIS F 524	28.130	37.259	38.884	1.00	45.74	N
ATOM 11283	N LEU F 525	29.153	38.848	43.834	1.00	47.03	N
ATOM 11284	CA LEU F 525	28.277	38.097	44.718	1.00	48.27	C
ATOM 11285	C LEU F 525	27.299	39.085	45.318	1.00	50.85	C
ATOM 11286	O LEU F 525	26.152	38.773	45.545	1.00	51.11	O
ATOM 11287	CB LEU F 525	28.994	37.334	45.834	1.00	47.01	C
ATOM 11288	CG LEU F 525	28.087	36.649	46.861	1.00	46.48	C
ATOM 11289	CD1 LEU F 525	27.252	35.545	46.217	1.00	46.77	C
ATOM 11290	CD2 LEU F 525	28.846	36.073	48.033	1.00	44.82	C
ATOM 11291	N TYR F 526	27.828	40.268	45.564	1.00	54.23	N
ATOM 11292	CA TYR F 526	27.094	41.370	46.113	1.00	57.12	C
ATOM 11293	C TYR F 526	26.054	41.819	45.113	1.00	58.45	C
ATOM 11294	O TYR F 526	24.917	41.914	45.553	1.00	59.44	O
ATOM 11295	CB TYR F 526	28.089	42.494	46.347	1.00	60.57	C
ATOM 11296	CG TYR F 526	27.348	43.606	47.035	1.00	64.58	C
ATOM 11297	CD1 TYR F 526	27.044	43.530	48.381	1.00	66.85	C
ATOM 11298	CD2 TYR F 526	26.949	44.705	46.310	1.00	66.77	C
ATOM 11299	CE1 TYR F 526	26.363	44.547	49.015	1.00	69.08	C
ATOM 11300	CE2 TYR F 526	26.261	45.738	46.915	1.00	69.34	C
ATOM 11301	CZ TYR F 526	25.985	45.640	48.263	1.00	70.67	C
ATOM 11302	OH TYR F 526	25.301	46.658	48.908	1.00	73.80	O
ATOM 11303	N SER F 527	26.369	42.060	43.843	1.00	59.50	N
ATOM 11304	CA SER F 527	25.278	42.468	42.940	1.00	60.55	C
ATOM 11305	C SER F 527	24.327	41.304	42.833	1.00	60.35	C
ATOM 11306	O SER F 527	23.156	41.553	43.056	1.00	61.25	O
ATOM 11307	CB SER F 527	25.730	42.961	41.586	1.00	61.93	C
ATOM 11308	OG SER F 527	26.754	42.118	41.103	1.00	63.76	O
ATOM 11309	N MET F 528	24.742	40.077	42.609	1.00	61.23	N
ATOM 11310	CA MET F 528	23.827	38.941	42.591	1.00	62.58	C
ATOM 11311	C MET F 528	22.868	38.997	43.776	1.00	63.36	C
ATOM 11312	O MET F 528	21.685	38.700	43.675	1.00	62.10	O
ATOM 11313	CB MET F 528	24.582	37.619	42.643	1.00	62.72	C
ATOM 11314	CG MET F 528	25.064	37.040	41.346	1.00	62.89	C
ATOM 11315	SD MET F 528	24.069	37.510	39.935	1.00	63.64	S
ATOM 11316	CE MET F 528	24.914	38.951	39.306	1.00	62.75	C
ATOM 11317	N LYS F 529	23.321	39.369	44.958	1.00	66.42	N
ATOM 11318	CA LYS F 529	22.475	39.471	46.138	1.00	70.08	C
ATOM 11319	C LYS F 529	21.500	40.629	46.007	1.00	72.23	C
ATOM 11320	O LYS F 529	20.342	40.515	46.377	1.00	73.02	O
ATOM 11321	CB LYS F 529	23.321	39.640	47.385	1.00	70.81	C
ATOM 11322	CG LYS F 529	22.897	40.708	48.352	1.00	72.53	C
ATOM 11323	CD LYS F 529	23.026	40.191	49.772	1.00	75.23	C

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ATOM 11324	CE LYS F 529	22.685 41.297 50.772 1.00 77.26	C
ATOM 11325	NZ LYS F 529	23.422 42.563 50.475 1.00 78.36	N
ATOM 11326	N CYS F 530	21.946 41.758 45.498 1.00 75.02	N
ATOM 11327	CA CYS F 530	21.101 42.933 45.314 1.00 77.91	C
ATOM 11328	C CYS F 530	20.033 42.629 44.301 1.00 79.45	C
ATOM 11329	O CYS F 530	18.859 42.955 44.490 1.00 80.76	O
ATOM 11330	CB CYS F 530	22.025 44.114 45.016 1.00 78.70	C
ATOM 11331	SG ACYS F 530	22.899 44.546 46.566 0.50 80.09	S
ATOM 11332	SG BCYS F 530	21.416 45.744 45.479 0.50 80.49	S
ATOM 11333	N LYS F 531	20.292 41.898 43.234 1.00 81.28	N
ATOM 11334	CA LYS F 531	19.308 41.500 42.243 1.00 83.47	C
ATOM 11335	C LYS F 531	18.344 40.450 42.794 1.00 84.98	C
ATOM 11336	O LYS F 531	17.427 39.952 42.142 1.00 85.33	O
ATOM 11337	CB LYS F 531	20.012 40.877 41.037 1.00 83.89	C
ATOM 11338	CG LYS F 531	20.464 41.860 39.987 1.00 85.48	C
ATOM 11339	CD LYS F 531	21.392 42.952 40.500 1.00 86.16	C
ATOM 11342	N ASN F 532	18.525 40.011 44.022 1.00 86.63	N
ATOM 11343	CA ASN F 532	17.721 39.005 44.675 1.00 88.09	C
ATOM 11344	C ASN F 532	17.741 37.721 43.881 1.00 86.68	C
ATOM 11345	O ASN F 532	16.719 37.247 43.442 1.00 87.53	O
ATOM 11346	CB ASN F 532	16.298 39.519 44.872 1.00 91.72	C
ATOM 11347	CG ASN F 532	16.280 40.661 45.890 1.00 95.40	C
ATOM 11348	OD1 ASN F 532	16.926 40.592 46.952 1.00 96.69	O
ATOM 11349	ND2 ASN F 532	15.536 41.730 45.570 1.00 96.83	N
ATOM 11350	N VAL F 533	18.892 37.123 43.662 1.00 85.18	N
ATOM 11351	CA VAL F 533	19.066 35.885 42.925 1.00 83.72	C
ATOM 11352	C VAL F 533	19.706 34.836 43.834 1.00 83.84	C
ATOM 11353	O VAL F 533	19.675 33.612 43.714 1.00 84.68	O
ATOM 11354	CB VAL F 533	20.056 36.159 41.775 1.00 83.41	C
ATOM 11355	CG1 VAL F 533	20.117 34.960 40.845 1.00 83.32	C
ATOM 11356	CG2 VAL F 533	19.726 37.416 40.987 1.00 83.26	C
ATOM 11357	N VAL F 534	20.401 35.347 44.836 1.00 83.29	N
ATOM 11358	CA VAL F 534	21.126 34.600 45.830 1.00 82.89	C
ATOM 11359	C VAL F 534	20.234 34.332 47.037 1.00 82.22	C
ATOM 11360	O VAL F 534	19.628 35.241 47.588 1.00 81.06	O
ATOM 11361	CB VAL F 534	22.348 35.414 46.347 1.00 83.68	C
ATOM 11362	CG1 VAL F 534	23.073 34.857 47.564 1.00 83.15	C
ATOM 11363	CG2 VAL F 534	23.361 35.599 45.222 1.00 84.29	C
ATOM 11364	N PRO F 535	20.214 33.078 47.449 1.00 82.07	N
ATOM 11365	CA PRO F 535	19.508 32.614 48.609 1.00 82.06	C
ATOM 11366	C PRO F 535	20.164 33.220 49.853 1.00 82.87	C
ATOM 11367	O PRO F 535	21.297 33.709 49.932 1.00 82.26	O
ATOM 11368	CB PRO F 535	19.633 31.079 48.693 1.00 81.49	C
ATOM 11369	CG PRO F 535	20.394 30.730 47.465 1.00 81.39	C
ATOM 11370	CD PRO F 535	20.953 31.980 46.818 1.00 82.12	C

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ATOM 11371	N	LEU F 536	19.366	33.139	50.919	1.00	84.39	N
ATOM 11372	CA	LEU F 536	19.693	33.630	52.239	1.00	84.86	C
ATOM 11373	C	LEU F 536	20.559	32.725	53.103	1.00	84.56	C
ATOM 11374	O	LEU F 536	20.213	32.487	54.278	1.00	86.23	O
ATOM 11379	N	TYR F 537	21.677	32.216	52.572	1.00	82.05	N
ATOM 11380	CA	TYR F 537	22.533	31.381	53.423	1.00	78.76	C
ATOM 11381	C	TYR F 537	23.201	32.364	54.386	1.00	76.46	C
ATOM 11382	O	TYR F 537	23.824	33.347	54.003	1.00	75.39	O
ATOM 11383	CB	TYR F 537	23.539	30.624	52.610	1.00	79.09	C
ATOM 11384	CG	TYR F 537	22.933	29.696	51.593	1.00	79.66	C
ATOM 11385	CD1	TYR F 537	22.161	28.620	51.994	1.00	80.46	C
ATOM 11386	CD2	TYR F 537	23.145	29.868	50.237	1.00	80.42	C
ATOM 11387	CE1	TYR F 537	21.608	27.734	51.084	1.00	81.18	C
ATOM 11388	CE2	TYR F 537	22.595	28.986	49.325	1.00	81.21	C
ATOM 11389	CZ	TYR F 537	21.829	27.923	49.737	1.00	81.37	C
ATOM 11390	OH	TYR F 537	21.273	27.056	48.831	1.00	81.44	O
ATOM 11391	N	ASP F 538	23.017	32.094	55.657	1.00	74.64	N
ATOM 11392	CA	ASP F 538	23.526	32.891	56.745	1.00	72.23	C
ATOM 11393	C	ASP F 538	25.015	33.031	56.925	1.00	67.31	C
ATOM 11394	O	ASP F 538	25.420	34.172	57.159	1.00	67.72	O
ATOM 11395	CB	ASP F 538	22.992	32.264	58.048	1.00	77.42	C
ATOM 11396	CG	ASP F 538	21.619	32.886	58.290	1.00	82.13	C
ATOM 11397	OD1	ASP F 538	21.513	34.116	57.981	1.00	84.34	O
ATOM 11398	OD2	ASP F 538	20.740	32.115	58.761	1.00	84.01	O
ATOM 11399	N	LEU F 539	25.798	31.971	56.859	1.00	60.88	N
ATOM 11400	CA	LEU F 539	27.242	32.127	57.052	1.00	55.96	C
ATOM 11401	C	LEU F 539	27.850	32.885	55.890	1.00	54.96	C
ATOM 11402	O	LEU F 539	28.722	33.736	56.057	1.00	55.09	O
ATOM 11403	CB	LEU F 539	27.864	30.778	57.301	1.00	53.97	C
ATOM 11404	CG	LEU F 539	29.311	30.610	57.718	1.00	52.16	C
ATOM 11405	CD1	LEU F 539	29.726	31.540	58.833	1.00	51.56	C
ATOM 11406	CD2	LEU F 539	29.591	29.178	58.141	1.00	51.41	C
ATOM 11407	N	LEU F 540	27.395	32.629	54.677	1.00	54.03	N
ATOM 11408	CA	LEU F 540	27.856	33.296	53.469	1.00	52.36	C
ATOM 11409	C	LEU F 540	27.484	34.776	53.536	1.00	52.20	C
ATOM 11410	O	LEU F 540	28.332	35.624	53.228	1.00	50.74	O
ATOM 11411	CB	LEU F 540	27.303	32.610	52.216	1.00	50.90	C
ATOM 11412	CG	LEU F 540	27.756	33.150	50.857	1.00	49.79	C
ATOM 11413	CD1	LEU F 540	29.171	32.700	50.530	1.00	48.69	C
ATOM 11414	CD2	LEU F 540	26.800	32.743	49.748	1.00	48.32	C
ATOM 11415	N	LEU F 541	26.270	35.143	53.967	1.00	53.14	N
ATOM 11416	CA	LEU F 541	25.963	36.582	54.029	1.00	55.03	C
ATOM 11417	C	LEU F 541	26.813	37.261	55.091	1.00	54.67	C
ATOM 11418	O	LEU F 541	27.143	38.445	54.954	1.00	54.78	O
ATOM 11419	CB	LEU F 541	24.471	36.886	54.165	1.00	57.03	C

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ATOM 11420	CG LEU F 541	23.726	36.216	52.990	1.00	60.87	C
ATOM 11421	CD1 LEU F 541	22.211	36.325	53.131	1.00	62.44	C
ATOM 11422	CD2 LEU F 541	24.173	36.738	51.619	1.00	61.65	C
ATOM 11423	N GLU F 542	27.196	36.511	56.120	1.00	53.31	N
ATOM 11424	CA GLU F 542	28.033	37.046	57.171	1.00	52.38	C
ATOM 11425	C GLU F 542	29.400	37.380	56.588	1.00	51.98	C
ATOM 11426	O GLU F 542	29.849	38.523	56.742	1.00	52.67	O
ATOM 11427	CB GLU F 542	28.154	36.038	58.284	1.00	53.28	C
ATOM 11428	CG GLU F 542	28.930	36.436	59.523	1.00	54.31	C
ATOM 11429	CD GLU F 542	28.840	35.304	60.533	1.00	55.57	C
ATOM 11430	OE1 GLU F 542	27.804	34.582	60.554	1.00	56.26	O
ATOM 11431	OE2 GLU F 542	29.816	35.135	61.288	1.00	56.01	O
ATOM 11432	N MET F 543	30.050	36.440	55.913	1.00	50.17	N
ATOM 11433	CA MET F 543	31.359	36.735	55.347	1.00	49.57	C
ATOM 11434	C MET F 543	31.291	37.827	54.311	1.00	50.51	C
ATOM 11435	O MET F 543	32.190	38.662	54.153	1.00	50.97	O
ATOM 11436	CB MET F 543	31.904	35.443	54.756	1.00	50.18	C
ATOM 11437	CG MET F 543	31.928	34.338	55.818	1.00	50.58	C
ATOM 11438	SD MET F 543	33.300	34.608	56.968	1.00	50.53	S
ATOM 11439	CE MET F 543	32.371	34.811	58.480	1.00	51.39	C
ATOM 11440	N LEU F 544	30.213	37.872	53.532	1.00	51.70	N
ATOM 11441	CA LEU F 544	30.040	38.927	52.527	1.00	51.52	C
ATOM 11442	C LEU F 544	29.902	40.269	53.223	1.00	52.54	C
ATOM 11443	O LEU F 544	30.556	41.205	52.775	1.00	52.11	O
ATOM 11444	CB LEU F 544	28.854	38.665	51.626	1.00	50.45	C
ATOM 11445	CG LEU F 544	28.403	39.709	50.627	1.00	50.36	C
ATOM 11446	CD1 LEU F 544	29.428	40.045	49.555	1.00	49.79	C
ATOM 11447	CD2 LEU F 544	27.139	39.252	49.892	1.00	50.77	C
ATOM 11448	N ASP F 545	29.117	40.388	54.286	1.00	55.62	N
ATOM 11449	CA ASP F 545	28.960	41.663	54.963	1.00	59.04	C
ATOM 11450	C ASP F 545	30.246	42.176	55.552	1.00	58.92	C
ATOM 11451	O ASP F 545	30.473	43.375	55.517	1.00	58.35	O
ATOM 11452	CB ASP F 545	27.925	41.675	56.071	1.00	63.84	C
ATOM 11453	CG ASP F 545	26.524	41.431	55.545	1.00	69.30	C
ATOM 11454	OD1 ASP F 545	26.272	41.517	54.303	1.00	71.71	O
ATOM 11455	OD2 ASP F 545	25.645	41.139	56.412	1.00	71.81	O
ATOM 11456	N ALA F 546	31.113	41.309	56.050	1.00	60.03	N
ATOM 11457	CA ALA F 546	32.383	41.737	56.626	1.00	60.35	C
ATOM 11458	C ALA F 546	33.065	42.685	55.670	1.00	61.98	C
ATOM 11459	O ALA F 546	33.609	43.684	56.084	1.00	62.84	O
ATOM 11460	CB ALA F 546	33.278	40.553	56.892	1.00	59.78	C
ATOM 11461	N HIS F 547	33.071	42.387	54.395	1.00	65.43	N
ATOM 11462	CA HIS F 547	33.678	43.150	53.341	1.00	68.65	C
ATOM 11463	C HIS F 547	33.001	44.445	53.024	1.00	73.29	C
ATOM 11464	O HIS F 547	33.676	45.455	52.845	1.00	74.87	O

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ATOM 11465 CB HIS F 547	33.616	42.285	52.055	1.00	67.39	C
ATOM 11466 CG HIS F 547	34.763	41.336	52.299	1.00	66.41	C
ATOM 11467 ND1 HIS F 547	35.973	41.497	51.682	1.00	66.39	N
ATOM 11468 CD2 HIS F 547	34.859	40.273	53.118	1.00	65.69	C
ATOM 11469 CE1 HIS F 547	36.787	40.556	52.092	1.00	66.04	C
ATOM 11470 NE2 HIS F 547	36.135	39.812	52.958	1.00	65.93	N
ATOM 11471 N ARG F 548	31.678	44.404	52.945	1.00	78.97	N
ATOM 11472 CA ARG F 548	30.955	45.658	52.630	1.00	83.75	C
ATOM 11473 C ARG F 548	31.150	46.660	53.763	1.00	84.72	C
ATOM 11474 O ARG F 548	31.662	46.337	54.864	1.00	85.13	O
ATOM 11475 CB ARG F 548	29.496	45.339	52.307	1.00	86.60	C
ATOM 11476 CG ARG F 548	29.193	44.003	51.648	1.00	89.75	C
ATOM 11477 CD ARG F 548	29.856	43.692	50.327	1.00	92.41	C
ATOM 11478 NE ARG F 548	30.388	44.805	49.549	1.00	94.87	N
ATOM 11479 CZ ARG F 548	31.341	44.762	48.623	1.00	95.85	C
ATOM 11480 NH1 ARG F 548	31.933	43.626	48.280	1.00	96.45	N
ATOM 11481 NH2 ARG F 548	31.701	45.895	48.025	1.00	96.58	N
TER 11482 ARG F 548						
HETATM11483 C1 EST F 600	31.833	28.623	45.202	1.00	35.64	C
HETATM11484 C2 EST F 600	32.504	27.552	45.778	1.00	37.10	C
HETATM11485 C3 EST F 600	33.867	27.496	45.667	1.00	38.21	C
HETATM11486 O3 EST F 600	34.562	26.445	46.244	1.00	40.39	O
HETATM11487 C4 EST F 600	34.646	28.450	44.995	1.00	37.37	C
HETATM11488 C5 EST F 600	33.944	29.534	44.418	1.00	36.36	C
HETATM11489 C6 EST F 600	34.714	30.358	43.427	1.00	35.92	C
HETATM11490 C7 EST F 600	33.835	31.301	42.629	1.00	35.02	C
HETATM11491 C8 EST F 600	32.749	31.882	43.516	1.00	34.38	C
HETATM11492 C9 EST F 600	31.802	30.741	43.904	1.00	34.81	C
HETATM11493 C10 EST F 600	32.552	29.616	44.525	1.00	35.41	C
HETATM11494 C11 EST F 600	30.593	31.193	44.697	1.00	35.14	C
HETATM11495 C12 EST F 600	29.742	32.231	43.916	1.00	34.83	C
HETATM11496 C13 EST F 600	30.699	33.372	43.550	1.00	34.81	C
HETATM11497 C14 EST F 600	31.919	32.864	42.761	1.00	33.93	C
HETATM11498 C15 EST F 600	32.542	34.190	42.382	1.00	34.40	C
HETATM11499 C16 EST F 600	31.295	34.827	41.658	1.00	35.71	C
HETATM11500 C17 EST F 600	30.135	34.338	42.522	1.00	35.71	C
HETATM11501 O17 EST F 600	29.277	35.383	42.960	1.00	37.33	O
HETATM11502 C18 EST F 600	31.036	34.100	44.828	1.00	34.22	C
HETATM11503 O HOH U 1	21.848	58.049	128.989	1.00	40.46	O
HETATM11504 O HOH U 2	2.109	53.126	126.118	1.00	65.57	O
HETATM11505 O HOH U 3	6.765	53.163	127.614	1.00	50.70	O
HETATM11506 O HOH U 4	4.264	57.656	127.962	1.00	59.52	O
HETATM11507 O HOH U 5	6.775	58.196	126.015	1.00	44.53	O
HETATM11508 O HOH U 6	8.449	55.388	126.316	1.00	49.12	O
HETATM11509 O HOH U 7	18.153	50.237	127.195	1.00	54.23	O

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HETATM11510	O	HOH U	8	21.397	55.268	122.647	1.00	47.01	O
HETATM11511	O	HOH U	9	15.628	63.018	112.608	1.00	74.18	O
HETATM11512	O	HOH U	10	22.790	46.040	129.344	1.00	67.31	O
HETATM11513	O	HOH U	11	11.683	46.006	112.647	1.00	59.22	O
HETATM11514	O	HOH U	12	5.895	56.660	116.043	1.00	57.86	O
HETATM11515	O	HOH U	13	25.458	70.001	126.746	1.00	73.20	O
HETATM11516	O	HOH U	14	24.497	52.915	106.792	1.00	58.51	O
HETATM11517	O	HOH U	15	4.234	56.305	140.939	1.00	80.83	O
HETATM11518	O	HOH U	16	-0.519	44.076	126.320	1.00	61.66	O
HETATM11519	O	HOH U	17	21.522	51.179	128.001	1.00	63.14	O
HETATM11520	O	HOH U	18	9.168	63.071	121.769	1.00	47.72	O
HETATM11521	O	HOH U	19	4.849	54.453	123.780	1.00	82.63	O
HETATM11522	O	HOH V	1	25.793	58.286	139.374	1.00	54.29	O
HETATM11523	O	HOH V	2	46.017	53.443	142.101	1.00	63.10	O
HETATM11524	O	HOH V	3	40.955	53.647	140.984	1.00	43.70	O
HETATM11525	O	HOH V	4	43.837	58.030	141.000	1.00	68.06	O
HETATM11526	O	HOH V	5	40.985	58.759	142.241	1.00	56.84	O
HETATM11527	O	HOH V	6	39.196	55.915	142.293	1.00	60.34	O
HETATM11528	O	HOH V	7	29.591	50.718	141.575	1.00	61.81	O
HETATM11529	O	HOH V	8	26.441	55.674	145.979	1.00	50.62	O
HETATM11530	O	HOH V	9	32.078	64.181	155.641	1.00	77.73	O
HETATM11531	O	HOH V	10	25.073	46.126	139.508	1.00	71.06	O
HETATM11532	O	HOH V	11	35.174	46.176	155.833	1.00	70.58	O
HETATM11533	O	HOH V	12	42.188	59.305	152.020	1.00	70.34	O
HETATM11534	O	HOH V	13	22.227	70.293	141.263	1.00	69.38	O
HETATM11535	O	HOH V	14	22.931	53.579	161.506	1.00	46.74	O
HETATM11536	O	HOH V	15	43.418	56.241	127.560	1.00	67.10	O
HETATM11537	O	HOH V	16	48.305	44.260	142.505	1.00	65.47	O
HETATM11538	O	HOH V	17	26.307	51.287	140.416	1.00	68.69	O
HETATM11539	O	HOH V	18	38.697	63.615	146.601	1.00	59.04	O
HETATM11540	O	HOH V	19	43.599	54.688	145.358	1.00	80.66	O
HETATM11541	O	HOH W	1	18.863	40.395	92.499	1.00	45.15	O
HETATM11542	O	HOH W	2	11.617	59.649	89.904	1.00	57.58	O
HETATM11543	O	HOH W	3	14.408	55.490	90.256	1.00	43.01	O
HETATM11544	O	HOH W	4	9.297	54.800	88.542	1.00	70.62	O
HETATM11545	O	HOH W	5	10.264	52.765	90.951	1.00	49.19	O
HETATM11546	O	HOH W	6	13.313	53.121	91.929	1.00	60.26	O
HETATM11547	O	HOH W	7	22.771	48.299	94.041	1.00	50.96	O
HETATM11548	O	HOH W	8	19.297	43.390	98.603	1.00	47.61	O
HETATM11549	O	HOH W	9	7.386	44.992	105.654	1.00	64.21	O
HETATM11550	O	HOH W	10	29.628	46.851	93.188	1.00	60.24	O
HETATM11551	O	HOH W	11	21.486	58.693	106.858	1.00	74.35	O
HETATM11552	O	HOH W	12	6.464	54.649	100.262	1.00	68.82	O
HETATM11553	O	HOH W	13	10.584	30.801	93.898	1.00	61.92	O
HETATM11554	O	HOH W	14	18.917	44.913	114.684	1.00	64.21	O

HETATM11555	O	HOH W	15	13.984	53.633	76.434	1.00	70.54	O
HETATM11556	O	HOH W	16	17.110	66.927	90.775	1.00	62.32	O
HETATM11557	O	HOH W	17	23.687	44.599	94.346	1.00	60.73	O
HETATM11558	O	HOH W	18	6.280	48.735	95.221	1.00	55.74	O
HETATM11559	O	HOH W	19	12.146	55.843	94.680	1.00	74.27	O
HETATM11560	O	HOH X	1	23.410	35.670	83.073	1.00	42.29	O
HETATM11561	O	HOH X	2	38.761	21.486	86.774	1.00	50.28	O
HETATM11562	O	HOH X	3	35.673	25.976	86.229	1.00	38.53	O
HETATM11563	O	HOH X	4	33.298	20.992	86.671	1.00	54.98	O
HETATM11564	O	HOH X	5	31.936	22.793	84.241	1.00	41.39	O
HETATM11565	O	HOH X	6	33.241	25.772	84.263	1.00	51.97	O
HETATM11566	O	HOH X	7	32.254	36.799	83.153	1.00	56.64	O
HETATM11567	O	HOH X	8	27.371	35.818	77.542	1.00	50.17	O
HETATM11568	O	HOH X	9	26.174	25.287	68.742	1.00	63.70	O
HETATM11569	O	HOH X	10	32.682	43.133	84.366	1.00	66.26	O
HETATM11570	O	HOH X	11	42.892	33.559	71.691	1.00	65.92	O
HETATM11571	O	HOH X	12	33.790	20.271	74.636	1.00	51.74	O
HETATM11572	O	HOH X	13	12.440	31.491	79.143	1.00	57.12	O
HETATM11573	O	HOH X	14	31.046	37.551	62.222	1.00	52.34	O
HETATM11574	O	HOH X	15	31.421	23.945	99.377	1.00	72.53	O
HETATM11575	O	HOH X	16	47.484	24.789	88.075	1.00	51.06	O
HETATM11576	O	HOH X	17	29.439	39.000	82.982	1.00	65.46	O
HETATM11577	O	HOH X	18	27.652	21.245	79.034	1.00	41.31	O
HETATM11578	O	HOH X	19	36.035	24.694	81.219	1.00	73.20	O
HETATM11579	O	HOH Y	1	51.022	42.856	41.650	1.00	50.42	O
HETATM11580	O	HOH Y	2	55.305	63.132	43.048	1.00	53.02	O
HETATM11581	O	HOH Y	3	53.204	58.251	42.745	1.00	40.49	O
HETATM11582	O	HOH Y	4	58.073	58.597	44.494	1.00	58.72	O
HETATM11583	O	HOH Y	5	57.914	56.292	42.192	1.00	47.79	O
HETATM11584	O	HOH Y	6	54.683	55.900	41.325	1.00	54.41	O
HETATM11585	O	HOH Y	7	46.143	49.605	39.217	1.00	56.96	O
HETATM11586	O	HOH Y	8	50.324	45.115	34.825	1.00	50.83	O
HETATM11587	O	HOH Y	9	62.094	47.962	27.730	1.00	76.57	O
HETATM11588	O	HOH Y	10	39.885	46.806	39.557	1.00	61.46	O
HETATM11589	O	HOH Y	11	46.347	59.084	26.059	1.00	72.51	O
HETATM11590	O	HOH Y	12	61.345	58.138	33.022	1.00	56.38	O
HETATM11591	O	HOH Y	13	60.304	34.626	39.805	1.00	61.76	O
HETATM11592	O	HOH Y	14	50.352	45.472	18.863	1.00	50.26	O
HETATM11593	O	HOH Y	15	53.818	57.125	56.560	1.00	66.19	O
HETATM11594	O	HOH Y	16	48.360	68.736	42.101	1.00	67.02	O
HETATM11595	O	HOH Y	17	45.590	45.900	38.932	1.00	68.45	O
HETATM11596	O	HOH Y	18	62.449	52.794	38.213	1.00	47.80	O
HETATM11597	O	HOH Y	19	55.536	59.041	38.868	1.00	68.17	O
HETATM11598	O	HOH Z	1	46.934	37.171	50.101	1.00	41.17	O
HETATM11599	O	HOH Z	2	34.165	20.922	47.061	1.00	50.41	O

HETATM11600	O	HOH Z	3	36.863	25.565	47.746	1.00	48.74	O
HETATM11601	O	HOH Z	4	39.998	21.594	47.150	1.00	63.60	O
HETATM11602	O	HOH Z	5	40.839	23.368	49.585	1.00	52.11	O
HETATM11603	O	HOH Z	6	39.133	26.153	49.772	1.00	59.33	O
HETATM11604	O	HOH Z	7	38.468	36.961	50.477	1.00	47.17	O
HETATM11605	O	HOH Z	8	43.196	36.928	56.104	1.00	42.56	O
HETATM11606	O	HOH Z	9	46.400	26.653	65.467	1.00	78.67	O
HETATM11607	O	HOH Z	10	36.448	43.177	48.827	1.00	65.41	O
HETATM11608	O	HOH Z	11	28.492	31.879	62.192	1.00	59.52	O
HETATM11609	O	HOH Z	12	39.635	20.562	59.171	1.00	61.65	O
HETATM11610	O	HOH Z	13	58.948	35.086	54.821	1.00	69.60	O
HETATM11611	O	HOH Z	14	39.105	38.326	71.399	1.00	56.57	O
HETATM11612	O	HOH Z	15	41.408	24.364	34.260	1.00	75.94	O
HETATM11613	O	HOH Z	16	25.083	22.557	45.757	1.00	66.82	O
HETATM11614	O	HOH Z	17	40.578	39.812	50.158	1.00	75.22	O
HETATM11615	O	HOH Z	18	45.346	22.421	55.001	1.00	43.55	O
HETATM11616	O	HOH Z	19	37.459	24.933	52.629	1.00	75.18	O

END

HEADER PROTEIN 02-JUN-98  
COMPND ERB\_RAL\_TRIV\_HM  
REMARK 1 HOMOLOGY MODEL OF ESTROGEN RECEPTOR-BETA COMPLEXED  
WITH RALOXIFENE.  
REMARK 1 ONLY COORDINATES OF RESIDUES IN THE IMMEDIATE VICINITY  
OF THE BINDING  
REMARK 1 CAVITY WHICH DIFFER BETWEEN THE ALPHA AND BETA  
ISOFORMS  
REMARK 1 (I326V,L384M,M421I,F445Y) ARE INCLUDED IN THIS SET OF  
COORDINATES.

REMARK 1

SEQRES 1 1 RAL  
SEQRES 1 1 VAL  
SEQRES 1 1 MET  
SEQRES 1 1 ILE  
SEQRES 1 1 TYR

ATOM	1	H1	RAL	600	-4.267	-4.115	0.855	1.00	0.00
ATOM	2	H2	RAL	600	6.124	-9.120	-4.735	1.00	0.00
ATOM	3	H4	RAL	600	-6.508	-7.165	-8.533	1.00	0.00
ATOM	4	C1	RAL	600	-2.209	-6.388	-1.171	1.00	35.79
ATOM	5	C2	RAL	600	-3.022	-5.575	-0.418	1.00	35.77
ATOM	6	C3	RAL	600	-2.468	-4.551	0.315	1.00	34.88
ATOM	7	O3	RAL	600	-3.394	-3.771	1.000	1.00	35.72
ATOM	8	C4	RAL	600	-1.095	-4.402	0.255	1.00	34.34
ATOM	9	C5	RAL	600	-0.282	-5.210	-0.472	1.00	33.83
ATOM	10	S6	RAL	600	1.392	-5.345	-0.623	1.00	33.30
ATOM	11	C7	RAL	600	1.437	-6.614	-1.747	1.00	34.55
ATOM	12	C8	RAL	600	2.670	-7.197	-2.336	1.00	34.77
ATOM	13	C9	RAL	600	3.798	-7.361	-1.574	1.00	36.70
ATOM	14	C10	RAL	600	4.963	-7.933	-2.060	1.00	38.09
ATOM	15	C11	RAL	600	5.021	-8.329	-3.381	1.00	38.32
ATOM	16	O11	RAL	600	6.202	-8.890	-3.817	1.00	42.30
ATOM	17	C12	RAL	600	3.929	-8.159	-4.184	1.00	36.41
ATOM	18	C13	RAL	600	2.784	-7.605	-3.624	1.00	35.52
ATOM	19	C14	RAL	600	-0.876	-6.231	-1.207	1.00	33.48
ATOM	20	C15	RAL	600	0.102	-7.018	-1.931	1.00	33.73
ATOM	21	C16	RAL	600	-0.339	-8.082	-2.678	1.00	32.72
ATOM	22	O16	RAL	600	0.055	-9.187	-2.381	1.00	33.17
ATOM	23	C17	RAL	600	-1.153	-7.980	-3.865	1.00	30.87
ATOM	24	C18	RAL	600	-1.626	-9.153	-4.381	1.00	31.15
ATOM	25	C19	RAL	600	-2.365	-9.164	-5.566	1.00	31.63
ATOM	26	C20	RAL	600	-2.556	-7.956	-6.174	1.00	33.92
ATOM	27	C21	RAL	600	-2.033	-6.764	-5.671	1.00	33.20
ATOM	28	C22	RAL	600	-1.320	-6.769	-4.485	1.00	31.18
ATOM	29	O23	RAL	600	-3.256	-7.757	-7.343	1.00	36.78
ATOM	30	C24	RAL	600	-4.531	-8.330	-7.438	1.00	37.00
ATOM	31	C25	RAL	600	-4.788	-8.085	-8.967	1.00	36.45
ATOM	32	N26	RAL	600	-5.683	-6.914	-9.055	1.00	35.91
ATOM	33	C27	RAL	600	-6.172	-6.718	-10.396	1.00	36.09

SUBSTITUTE SHEET (RULE 26)

ATOM	34	C28 RAL	600	-6.807	-5.358	-10.722	1.00	36.35
ATOM	35	C29 RAL	600	-5.854	-4.292	-10.160	1.00	37.35
ATOM	36	C30 RAL	600	-5.893	-4.476	-8.628	1.00	37.06
ATOM	37	C31 RAL	600	-5.128	-5.781	-8.312	1.00	36.69
TER	38	RAL	600					
ATOM	39	N VAL	326	-10.374	0.336	6.860	1.00	28.80
ATOM	40	CA VAL	326	-9.361	-0.745	6.687	1.00	29.08
ATOM	41	C VAL	326	-10.098	-2.048	6.446	1.00	30.33
ATOM	42	O VAL	326	-10.782	-2.408	7.420	1.00	31.88
ATOM	43	CB VAL	326	-8.502	-0.851	7.960	1.00	0.00
ATOM	44	CG1 VAL	326	-7.572	0.356	8.097	1.00	0.00
ATOM	45	CG2 VAL	326	-9.380	-1.011	9.202	1.00	0.00
TER	46	VAL	326					
ATOM	47	N MET	384	-0.518	0.331	-6.816	1.00	29.65
ATOM	48	CA MET	384	0.330	-0.505	-5.954	1.00	27.46
ATOM	49	C MET	384	1.092	0.363	-4.973	1.00	27.91
ATOM	50	O MET	384	1.177	-0.069	-3.819	1.00	30.10
ATOM	51	CB MET	384	1.242	-1.442	-6.767	1.00	0.00
ATOM	52	CG MET	384	1.955	-2.441	-5.853	1.00	0.00
ATOM	53	SD MET	384	0.753	-3.246	-4.754	1.00	0.00
ATOM	54	CE MET	384	0.101	-1.791	-3.881	1.00	0.00
TER	55	MET	384					
ATOM	56	N ILE	421	8.628	-12.779	-2.916	1.00	78.22
ATOM	57	CA ILE	421	8.027	-11.863	-1.963	1.00	75.82
ATOM	58	C ILE	421	8.924	-11.465	-0.800	1.00	73.78
ATOM	59	O ILE	421	8.751	-10.362	-0.239	1.00	74.09
ATOM	60	CB ILE	421	6.656	-12.402	-1.514	1.00	0.00
ATOM	61	CG1 ILE	421	5.781	-11.277	-0.956	1.00	0.00
ATOM	62	CG2 ILE	421	6.818	-13.551	-0.516	1.00	0.00
ATOM	63	CD1 ILE	421	4.403	-11.805	-0.550	1.00	0.00
TER	64	ILE	421					
ATOM	65	N TYR	445	0.980	11.271	6.670	1.00	29.57
ATOM	66	CA TYR	445	0.721	10.079	5.859	1.00	28.88
ATOM	67	C TYR	445	-0.200	10.346	4.692	1.00	29.32
ATOM	68	O TYR	445	-0.020	9.937	3.539	1.00	31.42
ATOM	69	CB TYR	445	0.048	9.054	6.790	1.00	0.00
ATOM	70	CG TYR	445	-0.544	7.847	6.076	1.00	0.00
ATOM	71	CD1 TYR	445	0.284	6.985	5.319	1.00	0.00
ATOM	72	CD2 TYR	445	-1.931	7.584	6.162	1.00	0.00
ATOM	73	CE1 TYR	445	-0.271	5.870	4.657	1.00	0.00
ATOM	74	CE2 TYR	445	-2.485	6.468	5.500	1.00	0.00
ATOM	75	CZ TYR	445	-1.656	5.609	4.747	1.00	0.00
ATOM	76	OH TYR	445	-2.196	4.530	4.108	1.00	0.00
TER	77	TYR	445					
CONNECT	1	7						
CONNECT	2	16						
CONNECT	3	32						
CONNECT	4	5 19						
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END

HEADER PROTEIN

02-JUN-98

COMPND ERB\_RAL\_TRIV\_HM

REMARK 1 HOMOMOLOGY MODEL OF ESTROGEN RECEPTOR-BETA COMPLEXED WITH ESTRADIOL.

REMARK 1 ONLY COORDINATES OF RESIDUES IN THE IMMEDIATE VICINITY OF THE BINDING

REMARK 1 CAVITY WHICH DIFFER BETWEEN THE ALPHA AND BETA ISOFORMS

REMARK 1 (I326V,L384M,M421I,F445Y) ARE INCLUDED IN THIS SET OF COORDINATES.

REMARK 1

SEQRES 1 1 VAL

SEQRES 1 1 MET

SEQRES 1 1 ILE

SEQRES 1 1 TYR

SEQRES 1 1 EST

ATOM 1 N VAL 326 -11.224 -0.052 6.620 1.00 39.12

ATOM 2 CA VAL 326 -10.143 -1.032 6.600 1.00 41.64

ATOM 3 C VAL 326 -10.814 -2.379 6.299 1.00 39.77

ATOM 4 O VAL 326 -11.702 -2.698 7.071 1.00 40.82

ATOM 5 CB VAL 326 -9.395 -1.272 7.924 1.00 0.00

ATOM 6 CG1 VAL 326 -10.377 -1.481 9.079 1.00 0.00

ATOM 7 CG2 VAL 326 -8.431 -2.454 7.803 1.00 0.00

TER 8 VAL 326

ATOM 9 N MET 384 -0.511 0.125 -6.890 1.00 17.91

ATOM 10 CA MET 384 0.338 -0.618 -5.950 1.00 16.18

ATOM 11 C MET 384 1.137 0.283 -5.026 1.00 15.23

ATOM 12 O MET 384 1.386 -0.122 -3.893 1.00 14.71

ATOM 13 CB MET 384 1.228 -1.597 -6.738 1.00 0.00

ATOM 14 CG MET 384 1.991 -2.526 -5.792 1.00 0.00

ATOM 15 SD MET 384 0.846 -3.276 -4.598 1.00 0.00

ATOM 16 CE MET 384 0.204 -1.779 -3.793 1.00 0.00

TER 17 MET 384

ATOM 18 N ILE 421 8.978 -13.531 -2.526 1.00 43.47

ATOM 19 CA ILE 421 8.272 -12.571 -1.708 1.00 42.84

ATOM 20 C ILE 421 9.000 -11.994 -0.512 1.00 41.79

ATOM 21 O ILE 421 8.671 -10.915 -0.032 1.00 42.73

ATOM 22 CB ILE 421 7.062 -13.291 -1.086 1.00 0.00

ATOM 23 CG1 ILE 421 5.802 -13.075 -1.927 1.00 0.00

ATOM 24 CG2 ILE 421 6.859 -12.865 0.370 1.00 0.00

ATOM 25 CD1 ILE 421 4.910 -11.996 -1.310 1.00 0.00

TER 26 ILE 421

ATOM 27 N TYR 445 0.893 11.002 7.010 1.00 26.57

ATOM 28 CA TYR 445 0.606 9.859 6.163 1.00 25.43

ATOM 29 C TYR 445 -0.368 10.205 5.048 1.00 26.00

ATOM 30 O TYR 445 -0.143 9.956 3.875 1.00 27.76

ATOM 31 CB TYR 445 0.002 8.739 7.031 1.00 0.00

ATOM 32 CG TYR 445 -0.659 7.617 6.243 1.00 0.00

ATOM 33 CD1 TYR 445 0.103 6.819 5.358 1.00 0.00

SUBSTITUTE SHEET (RULE 26)

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ATOM  34 CD2 TYR  445  -2.043  7.369  6.390  1.00  0.00
ATOM  35 CE1 TYR  445  -0.514  5.782  4.627  1.00  0.00
ATOM  36 CE2 TYR  445  -2.660  6.332  5.660  1.00  0.00
ATOM  37 CZ  TYR  445  -1.897  5.537  4.778  1.00  0.00
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ATOM  47 C16 EST 600   4.039 -8.994 -4.192  1.00 16.44
ATOM  48 C17 EST 600   2.662 -9.592 -4.528  1.00 17.04
ATOM  49 C18 EST 600   1.350 -7.606 -5.264  1.00 15.85
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ATOM  54 C6  EST  600   1.441 -5.085 -0.519  1.00 17.60
ATOM  55 C7  EST  600   2.235 -6.245 -1.101  1.00 17.38
ATOM  56 C8  EST  600   1.537 -6.813 -2.335  1.00 16.43
ATOM  57 C9  EST  600   0.199 -7.423 -1.870  1.00 16.55
ATOM  58 O17 EST  600   2.606 -10.047 -5.874  1.00 17.97
ATOM  59 O3  EST  600  -2.979 -3.688  0.922  1.00 21.58
TER   60  EST  600
CONNECT 40 41 50
CONNECT 41 40 53 57
CONNECT 42 43 57
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CONNECT 56 45 55 57
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CONNECT 58 48
CONNECT 59 51
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END

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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification:</b> <b>C07K 14/72, C07D 333/54, 333/56, 333/58, 333/60, 409/04, 417/04, C07J 41/00, 1/00</b>	<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 98/56812</b>  <b>(43) International Publication Date:</b> 17 December 1998 (17.12.98)												
<b>(21) International Application Number:</b> PCT/GB98/01708  <b>(22) International Filing Date:</b> 10 June 1998 (10.06.98)  <b>(30) Priority Data:</b> <table border="0"> <tr> <td>9711992.9</td> <td>10 June 1997 (10.06.97)</td> <td>GB</td> </tr> <tr> <td>9717346.2</td> <td>15 August 1997 (15.08.97)</td> <td>GB</td> </tr> <tr> <td>9803061.2</td> <td>13 February 1998 (13.02.98)</td> <td>GB</td> </tr> <tr> <td>9803202.2</td> <td>16 February 1998 (16.02.98)</td> <td>GB</td> </tr> </table> <b>(71) Applicant (for all designated States except US):</b> KARO BIO AB [SE/SE]; Novum, S-141 57 Huddinge (SE).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> ÖHMAN, Lars [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). BONN, Tomas [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). CARLQUIST, Mats [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). ENGSTRÖM, Owe [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). GOEDE, Patrick [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). HEDFORS, Åsa [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). HOLMGREN, Erik [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). KOEHLER, Konrad [SE/SE]; Karo Bio AB, Novum, S-141 57 Huddinge (SE). BZOZOWSKI, Andrzej, Marek [GB/GB]; The University		9711992.9	10 June 1997 (10.06.97)	GB	9717346.2	15 August 1997 (15.08.97)	GB	9803061.2	13 February 1998 (13.02.98)	GB	9803202.2	16 February 1998 (16.02.98)	GB	of York, Heslington, York YO1 5DD (GB). PIKE, Ashley, Charles, William [GB/GB]; The University of York, Heslington, York YO1 5DD (GB). HUBBARD, Roderick, Eliot [GB/GB]; The University of York, Heslington, York YO1 5DD (GB).  <b>(74) Agent:</b> WITHERS & ROGERS; 4 Dyer's Buildings, Holborn, London EC1N 2JT (GB).  <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>  <b>(88) Date of publication of the international search report:</b> 1 April 1999 (01.04.99)
9711992.9	10 June 1997 (10.06.97)	GB												
9717346.2	15 August 1997 (15.08.97)	GB												
9803061.2	13 February 1998 (13.02.98)	GB												
9803202.2	16 February 1998 (16.02.98)	GB												
<b>(54) Title:</b> ESTROGEN RECEPTOR CRYSTALS AND LIGANDS  <b>(57) Abstract</b>  Crystal comprising at least part of the ER $\alpha$ ligand binding domain, optionally bound to a ligand, ligands that bind to ER receptors, and methods of designing them, and a homology model of the ER $\beta$ receptor.														

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# INTERNATIONAL SEARCH REPORT

Int lional Application No  
PCT/GB 98/01708

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C07K14/72 C07D333/54 C07D333/56 C07D333/58 C07D333/60  
C07D409/04 C07D417/04 C07J41/00 C07J1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C07K C07J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	---	1
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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Date of the actual completion of the international search

15 December 1998

Date of mailing of the international search report

11. 02. 1999

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Authorized officer

Rufet, J

International Application No  
PCT/GB 98/01708

PCT/GB 98/01708

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	see the whole document ---	6,7,52
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A	WO 97 09348 A (KARO BIO AB) 13 March 1997 see the whole document ---	1-4,7,8, 56,58
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Int'l Application No

PCT/GB 98/01708

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DANIELIAN P S ET AL: "IDENTIFICATION OF A CONSERVED REGION REQUIRED FOR HORMONE DEPENDENT TRANSCRIPTIONAL ACTIVATION BY STEROID HORMONE RECEPTORS" EMBO JOURNAL., vol. 11, no. 3, March 1992, pages 1025-1033, XP000611428 EYNHAM, OXFORD GB see the whole document	1-4, 13, 14
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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 98/01708

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	EP 0 835 872 A (LILLY CO ELI) 15 April 1998 see page 6, lines 18 - 21, 26 - 31; page 8, lines 18, 19, 21, 22, 24, 25, 43 - 45, 49, 50 - 52; page 9, lines 32 - 34, 37, 38, 43 - 51; page 10, lines 34, 35, 37, 38, 42 ---	28-30, 45
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International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HARRY R. ALLCOCK ET AL.: "Reactions of steroid salts with hexachlorocyclotriphosphazene" JOURNAL OF ORGANIC CHEMISTRY., vol. 46, no. 1, 2 January 1981, pages 13-22, XP002087606 EASTON US see page 14, compound VI ----	25, 35-40, 42-44, 50,51
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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 98/01708

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Remark: Although claim 53 could, at least partially, be considered as a mere presentation of information (Rule 39.1(v) PCT), and claim 54 at least partially as a computer programme (Rule 39.1(vi) PCT), the search has been carried out as far as possible in our systematic documentation.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-15,52-58

Crystals of ER-alpha and their use in a method for designing ligands which bind to an ER. Machine-readable storage medium capable of displaying a graphical three-dimensional representation of ER crystals. A method for evaluating the ability of a chemical to associate with an estrogen receptor employing computational means to perform a fitting operation.

2. Claims: 16-27 completely and 38,39,42,43,50,59-63 partially

Ligands for estrogen receptors. Ligands which have the general structure of formula Z. Pharmaceutical compositions containing these ligands and use thereof.

3. Claims: 28-31,37,45,51 completely and 35,36,38,39,42,43,48, 49,50,59-63 partially

As invention 2 but limited to an ER-alpha or ER-beta selective ligand, which is a 2'-,3'-,5'-,6'-substituted 2-aryl benzothiophene

4. Claims: 32-34 completely and 59-63 partially

As invention 2 but limited to an ER ligand capable of filling the hydrophobic cavity of ER-alpha

5. Claims: 35,36,48,49,59-63 partially

As invention 2 but limited to an ER-alpha or ER-beta selective ligand, which is a position 3 substituted estradiol

6. Claims: 40,41,44 completely and 42,59-63 partially

As invention 2 but limited to an ER-beta selective ligand, which is a steroid nucleus with substitutions larger than methyl at the alpha 14, 16 or 17 positions

7. Claims: 46,47 completely and 59-63 partially

As invention 2 but limited to an ER-alpha or ER-beta selective ligand which is a 6,3'-dihydroxybenzothiophene with substitutions larger than methyl at the R2' and/or R3' position

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 98/01708

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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